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HAWKER SIDDELEY

1988 ANNUAL REPORT & ACCOUNTS

1025

BOARD OF **DIRECTORS**

Chairman

Sir Peter Baxendell, CBE Appointed to the Board, August 1984: Chairman, May 1986; previously Chairman and Managing Director of Shell Transport and Trading; currently a Director of Shell, also of Inchcape.

Managing Director and Chief Executive

Bernard R. Bensly, CEng, FIMechE, FIProdE Appointed to the Board, March 1977; Managing Director and Chief Executive, March 1984.

Sir Lindsay Alexander Non-executive Director. Appointed, April 1981; currently a Director of Lloyds Bank, British Petroleum, and other companies; previously Chairman of Ocean Transport & Trading and Deputy Chairman of Lloyds Bank.

Brian M. Bonfield Appointed to the Board, October 1984.

David G. Bury, FCA Finance Director. Appointed to the Board, March 1986.

Sir James Hamilton, KCB, MBE, FEng Non-executive Director. Appointed, October 1983; formerly Permanent Under-Secretary of State at the Department of Education and Science, having previously served as Head of Projects Division at the Royal Aircraft Establishment.

Secretary

David R. Gilbert, TD, MA, LLM

Christopher Hampson (Canada) Non-executive Director. Appointed, February 1989; currently a Director of ICI and Costain Group.

Quinton Hazell, CBE, DL Non-executive Director. Appointed, February 1979; Chairman of Aerospace Engineering PLC and a Director of a number of other companies.

Timothy W.B. Sallitt, FIIM Appointed to the Board, March 1977.

Robert A. Willford, BSc, CEng, MIEE, MIIM Appointed to the Board, October 1981.

Sir Rowland Wright, CBE, BSc, CChem, FRSC Non-executive Director. Appointed, February 1979; served successively as the Chairman of ICI and Blue Circle and as Director of a number of other companies.

Group Executive

*B.R. Bensly Chairman *B.M. Bonfield *D.G. Bury

H.R. Grant

*Group Director

R.P. Hampson P. Howard F.W. Mack (USA) B.S. Price (Australia) *R.A. Willford

W.J. Richardson *T.W.B. Sallitt B.G. Shoosmith

Registered Office 18 St. James's Square London SW1Y 4LJ Solicitors

Simmons & Simmons

Registrar

Lloyds Bank Plc Registrar's Department Goring-by-Sea Worthing West Sussex BN12 6DA

Auditors to the Company

Price Waterhouse Auditors to subsidiaries Price Waterhouse

Peat Marwick McLintock

1988 1987 £m £m Turnover 1,868 1,743 Group trading profit 183.6 162.4 Profit before taxation 183.7 $163 \cdot 2$ Profit after taxation and minority interests 110-9 95.7 Shareholders' funds 780-4 721-3 Cash generation (absorption) 43.8 (20.6)56·2p 48.5p Earnings per share Dividend per share: 5.5p 8·4p Interim 14·1p 13·5p Final

FINANCIAL HIGHLIGHTS

Including the imputed tax credit, the equivalent total gross dividend paid or recommended for 1988 is 30·0p (1987: 25·53p)

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CHAIRMAN'S STATEMENT



1988 has been a good year for the Hawker Siddeley Group and we are continuing to demonstrate significant growth as our repositioning policies bear fruit.

The profit before tax increased to £184 million (1987: £163m) and was in line with our expectations. Profit after tax and minority interest increased to £111 million (1987: £96m). Earnings per share rose by 16% to 56·2p (1987: 48·5p). This represents a return on sales of 9·8% (1987: 9·3%) and a return on capital employed of 21·8% (1987: 19·5%).

Dividend

In the 1987 Annual Report, 1 advised shareholders that as the interim dividend in 1987 represented only 29% of the total dividend, the position would be reviewed at the time of the next interim declaration. Consequently, in October 1988, the Directors declared an interim dividend in respect of the year ending 31st December, 1988 of 8·4p, as

against 5.5p for the 1987 interim – an increase of 53%. The Board is now recommending a final dividend of $14\cdot1p$ (1987: $13\cdot5p$) giving a total for the year of $22\cdot5p$ (1987: $19\cdot0p$); an increase for the year of 18%.

The Group's direction

We have two principal aims in our forward planning for the Group.

- To identify and build upon those areas of our engineering businesses, or areas closely related to them, where we see the greatest prospects for growth, and,
- b) To ensure that in those sectors of our businesses where we visualise steady rather than rapid growth, our productivity and cost structures are such that we can retain a competitive edge and generate a satisfactory long term return on capital employed.

Over recent years the identification of growth opportunity areas has been followed up by a sharply focused acquisition programme. We have aimed to add businesses which not only have growth prospects in themselves, but also enhance the prospects of our existing businesses, either by opening up new markets or acquiring new technology. This process has continued during 1988 and nine acquisitions were made at a cost of £52 million.

In pursuing our second aim of a satisfactory return on capital employed in areas of less rapid but steady growth prospects, we have again increased our capital investment aimed at manufacturing efficiency and cost competitiveness. We have also continued our policy of withdrawing from certain areas notably during 1988 in transport refrigeration and water engineering - where we considered that the Group's objectives of growth and profitability would be difficult to achieve. A similar rigorous approach is being employed in Hawker Siddeley Canada (Group interest 59%), where the rail car construction activities at Trenton, Nova Scotia, were sold in 1988 and a decision has also been taken to divest the Tree Farmer Equipment Company. In November 1988, the Group's 65% shareholding in Invergordon Distillers was sold for £60 million, which represented an attractive offer for a company which, though profitable and well managed, was essentially peripheral to our mainstream business.

The shape of the Group

As a result of these moves, the shape of the Group has altered substantially over recent

years. You will notice from the Sector breakdown that our Electrical Sectors in 1988 contributed almost two thirds of the Group's trading profit, with a particularly vigorous performance coming from Electric Motors and Electrical Distribution and Controls. The Diesel Engineering Sector, which has been a source of concern, is now much healthier and the prospects there are correspondingly brighter. The Mechanical Specialised Equipment Sector has undergone considerable rationalisation during 1988. It contains a number of businesses which we believe are capable of making a satisfactory long term contribution to the Group - Aerospace especially is seen as a growth opportunity area. Further details of Sector performance are included in the Chief Executive's review, and in the Review of operations in this Report.

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In geographical terms, while our acquisitions have been mainly outside the United Kingdom, it is gratifying that both sales and trading profit from UK activities have continued to improve. The UK in 1988 contributed just over 50% of the Group's trading profit – activities in the USA and Australia contributed 24% and 11% respectively, and our businesses in both these countries are progressing satisfactorily. A great deal of effort is being devoted to following up opportunities in Continental Europe, not only in establishing market penetration but also in collaborative initiatives with European manufacturers.

Financial strength

The Group balance sheet remains strong with shareholders' funds of £780 million (1987: £721m), and a net cash-in-hand position of £98 million (1987: £46m) at the 31st December, 1988. Acquisitions during 1988 cost £52 million and capital expenditure amounted to £89 million. Disposals of businesses during the year realised £71 million.

We intend to use this strong position to pursue our acquisition policy aimed at enhancing the Group's rate of growth.

An extraordinary credit in the year of £10.9 million after tax (1987: £10.7m charge) mainly relates to the profit arising from the disposal of the Group's 65% shareholding in Invergordon Distillers, offset by the cost of divesting the Tree Farmer Equipment activity.

People

In January, 1989, Sir Thomas Sopwith, the

Founder of the Group and its Life President died at the age of 101 after a full life of achievement and of inspiration to the Hawker Siddeley Group.

On the 30th June, 1989, the Group's Managing Director and Chief Executive, Mr. B. R. Bensly, will be retiring having reached retirement age. Mr. Bensly has been with the Group since 1971 and Chief Executive since 1984. He has led the Group with great skill and the utmost dedication, and on behalf of his fellow Directors, I would like to thank him and wish him a long and happy retirement.

Mr. Bensly will be succeeded by Dr. Alan Watkins, previously Managing Director Aerospace of the Lucas Group, who will join the Board in May.

On behalf of the Directors, I would like to thank all the employees of the Group for their efforts in 1988 which have contributed to a successful year.

The future

We look forward to the future with considerable confidence. In the short term, the order-books of most of our operating units show an improvement on the corresponding position a year ago and this augurs well for 1989.

For the longer term, we feel similarly confident. We believe that we have correctly identified our prospective growth areas, and the acquisition programmes that we have undertaken have lived up to expectations in a very satisfactory manner. We have shed, and will continue to shed, businesses which we feel will not contribute to our long term objectives. With our strong financial position, we are well placed to pursue acquisitions as they are identified.

The world economic climate is uncertain but your Board believes that the Group is performing well and will be able to demonstrate significant profitable growth in the years ahead.

Sir Peter Baxendell, *Chairman* 19th April, 1989

CHIEF EXECUTIVE'S REVIEW



1988 proved to be a successful year for the Group with continuation of the progress that was anticipated in last year's Annual Report, resulting in higher profits and earnings per share.

Substantial advances were made in the Group's electrical businesses, partly through a strong recovery in the trading performance of certain units and partly through the growing contribution from businesses acquired during the past three years.

The strategy of concentrating the Group's activities upon fewer but stronger businesses where the greatest growth potential can be realised was successfully pursued. In 1988 £52 million was spent on nine acquisitions to strengthen existing operations based in the USA, UK and Australia. The principal purchases, all in the USA, were Dranetz

Technologies, a leading manufacturer of precision electronic instrumentation products, Von Weise Gear Company, a manufacturer of fractional horsepower gearmotors and gear reducers, and Harowe Servo Controls, a manufacturer of servo rotary components and subfractional horsepower electric motors. In the UK the main purchase was Gates Energy Products (Acton), subsequently renamed Tungstone Energy Products, a manufacturer of high performance sealed lead-acid batteries for aircraft and specialised industrial applications. All these niche businesses offer good potential for the Group.

During the year the Group withdrew from activities such as transport refrigeration and water engineering with the sale of Petter Refrigeration, Hawker Siddeley Water Engineering and Hawker Siddeley Brackett. Towards the end of the year an offer was accepted for the sale of the Group's shareholding in Invergordon Distillers from a company formed by its management. Although Invergordon had an excellent record under Hawker Siddeley control, whisky distilling was peripheral to the mainstream operations of the Group and the opportunity was taken to accept a good price.

Capital expenditure by Group companies in 1988 came to £89 million. Two new factories were successfully brought into operation in the UK, for Westcode Semiconductors and Insumat, the former being a high technology facility, which has doubled the capacity for the manufacture of power semiconductor devices, 80% of which are exported. At the same time a continuing programme was pursued throughout the Group to upgrade plant and equipment in order to lower manufacturing costs and provide greater flexibility and better quality.

During the year the Group generated funds of £114 million before acquisitions, disposals and capital expenditure. After taking these into account, as well as the effect of changes in exchange rates, the Group's net liquid funds increased from £46 million to

£98 million at the end of the year.

The table on page 6 shows that profit improvement was achieved in all of the Group's business sectors except Mechanical Specialised Equipment. The three Electrical Sectors continued to generate the best growth. A particularly strong performance was achieved in Electric Motors and in Electrical Distribution and Controls. There was a healthy flow of new products being introduced by Group companies within these sectors, including electric motors and controls, fusegear, switchgear, transformers, instruments, sensors, lamps and lighting and batteries. Almost two thirds of the Group's trading profit came from the three Electrical Sectors combined.

The Group continued to pursue growth on a worldwide basis. The geographical analysis of sales and profit by area of manufacture, on page 6, shows that 51% of the Group trading profit arose from the UK and 49% from overseas. Although the analysis is distorted by currency fluctuations, good progress was made in the USA, Australia and on the European Continent. Exports from the UK, amounting to £327 million in 1988, again played a crucial role in the Group's performance with sizeable exports by Mirrlees Blackstone, Lister-Petter, Brush Electrical Machines, Brook Crompton and Crompton Parkinson Cables. The efforts of two companies, Brush Electrical Machines and Hawker Siddeley Power Engineering, were rewarded when they received the Queen's Award for Export Achievement 1988. The Group was particularly successful in obtaining some substantial contracts in Asia and the Far East, including Bangladesh, China, Hong Kong, India, Japan, Sri Lanka and Thailand.

The largest individual contract won by the Group during the year was the £120 million order from British Rail placed with Brush Electrical Machines for the construction of 100 diesel electric locomotives, designated Class 60. These new locomotives, powered by Mirrlees Blackstone diesel engines, will be used to haul heavy freight trains for BR

Railfreight. The planned delivery runs from the middle of 1989 to the end of 1991. In addition, three major contracts were obtained by Hawker Siddeley Power Engineering for the construction of combined cycle power stations in the USA. Each of these power stations will utilise Group products in their construction.

The new management structure, introduced at the start of 1988, proved to be effective and continues to leave the managers of the operating units with a considerable degree of autonomy in developing their businesses, whilst maintaining strict financial control at the centre. A great deal of time and effort is being devoted to identifying and following up opportunities in Continental Europe in order to position the Group to take maximum advantage from the progress towards a single European market. One important initiative taken during 1988, which is being effected in 1989, is the merger of the Group's cable interests with those of Delta plc. Both parties believe that the merged business, in which the Group has a 36% shareholding, will be better equipped to deal with the opportunities and threats within a European context.

The overall prospect for 1989 is one of steady and continuing growth for most of the Group's operations. The stronger pound has made it more challenging for the UK-based companies to obtain international contracts at acceptable prices but, worldwide, it is considered that the level of economic activity is strong enough to present continuing opportunities for the Group. 1989 began with order-books in most of the operating units ahead of the level at the start of the previous year, and this augurs well for trading in 1989.

The review, which starts on page 7 reports on the Group's main activities in greater detail.

Bernard R. Bensly, *Chief Executive* 19th April, 1989

FINANCIAL TABLES

	Turnover		Trading Profit		Capital Employed	
	1988 £m	1987 £m	1988 £m	1987 £m	1988 [°] £m	1987 £m
Analysis by activity	LM	£m	LM	£III	LM	£III
Electric motors and generators	279	232	30-4	26.6	115	104
Electrical distribution and controls	504	460	53-8	40.2	184	155
Electrical specialised equipment	338	326	32-9	29.8	137	152
Diesel engineering	191	154	14.7	13.7	119	113
Mechanical specialised equipment	492	460	42.7	43.6	288	240
Continuing businesses	1,804	1,632	174-5	153.9	843	764
Discontinued activities	64	111	9-1	8.5		68
	1,868	1,743	183-6	162-4	843	832

Geographical analysis by area of manufacture

	1,868	1,743	183-6	162.4	843	832
Other	118	111	12.3	12.5	51	28
Canada	96	87	12-4	14.0	126	101
Australia	255	233	20-2	17-6	115	88
USA	425	390	45-3	41.3	199	173
United Kingdom	974	922	93-4	77.0	352	442

The composition of capital employed is shown on page 44.

The Group's activities are described in this section of the report under the following five main business segments: —

REVIEW OF OPERATIONS



ELECTRIC MOTORS AND GENERATORS



ELECTRICAL DISTRIBUTION AND CONTROLS



ELECTRICAL SPECIALISED EQUIPMENT



DIESEL ENGINEERING



MECHANICAL SPECIALISED EQUIPMENT

ELECTRIC MOTORS AND GENERATORS

Small Machines

Brook Crompton Parkinson Motors Ltd Brook Crompton Parkinson Pty Ltd Fasco Motors Harowe Servo Controls Von Weise Gear Company

Large Machines

Brook Crompton Parkinson Motors Ltd Brush Electrical Machines Ltd Crompton Greaves Ltd (related company) Kirloskar Electric Co Ltd (related company)



La Pyramide outside the Louvre in Paris houses electric pump motors supplied by Moteurs Electriques Hawker Siddeley for the fountains.

Main Picture

The US satellite dish industry is a major user of Von Weise Gear linear actuators.

In improved market conditions the Group further strengthened its position as the leading manufacturer of electric motors in the UK and as one of the most important manufacturers of fractional horsepower electric motors in the USA. Trading profit increased by 14% to £30·4 million, representing 17% of the Group total. The best progress was made in Small Machines, and this was helped by two acquisitions in the USA during the first half year. Although hampered by substantial increases in the price of key raw materials, it is expected that profits will continue to grow in 1989.

Small Machines

All of the operating units in the Small

Machines segment achieved a useful increase
in profits. The motor division of Fasco
Industries would have yielded an even higher
contribution but for the translation of their
profits into sterling at a higher exchange
rate. Fasco took steps to broaden their

product range into related products through the acquisition of Harowe Servo Controls in March and Von Weise Gear Company in June. Harowe, which is based at West Chester, Pennsylvania, brings in precision servo rotary components and subfractional horsepower electric motors for instruments, machine tools and military applications. Von Weise, which is located in St. Clair, Missouri, brings in fractional horsepower gearmotors used for hospital beds and other medical aids, ice machines and satellite dishes. Both product lines complement Fasco's existing range and present wider opportunities for growth.

In the UK, the industrial motor and industrial controls divisions of Brook
Crompton did well. Good progress was made in the development of advanced AC motors in the UK and specialised brushless DC motors in the USA. The wholly-owned subsidiary in Australia had a record year due to the success of its locally manufactured



motors, as well as distribution of motors made in the UK.

Large Machines

The industrial division of Brush Electrical Machines experienced a more difficult year, but recovered strongly as the year progressed. In the second half there was a steady improvement in the demand for Brush generators for use in cogeneration and waste energy recovery schemes in the USA and in diesel generation, particularly in China. The industrial controls division of Brush improved profitability within each of its three business segments: variable speed industrial drives, plant automation packages and automotive test systems. Brush has a strong exporting tradition and this was recognised with the award of the Queen's Award for Export Achievement 1988.

Brook Crompton's large machine division had a good year, expanding rapidly in the supply of motors from 37 to 650 KW, and is now one of Europe's leading manufacturers in this range.

The Indian companies, Crompton Greaves (37.5% owned) and Kirloskar Electric (20.3% owned), maintained their contribution to Group profits, although substantial increases in raw material prices, which could not be passed on, limited profit growth.

	1988	1987
	£m	£m
Sales	279	232
Trading		
Profit	30-4	26.6



Wind generators in the Viking 2 power scheme in California use some 100 Brook Crompton induction generators.

ELECTRICAL DISTRIBUTION AND CONTROLS

Engineering Contracting

Hawker Siddeley Power Engineering Ltd Hawker Siddeley Power Engineering Inc

Switchgear

Brush Fusegear Ltd Brush Fuses Inc Brush Switchgear Ltd South Wales Switchgear Ltd

Transformers

Brush Transformers Ltd South Wales Transformers Hawker Siddeley Power Transformers Ltd

Instruments and Controls

Hawker Instrumentation
Supplies Ltd
Hawker Instruments Inc
Dranetz Technologies Inc
Daytronic Corporation
Fasco Sensors and Controls
Hawker Siddeley Dynamics
Engineering Ltd
Westinghouse Systems Ltd

Cables

Delta Crompton Holdings Ltd (related company)



US elevator manufacturer, Otis, sources 80 per cent of its terminal block requirements from Brush Fuses.

Main Picture

The £50 million Sunlaw cogeneration scheme in California was designed and built by Hawker Siddeley Power Engineering.



In 1988 the Electrical Distribution and Controls sector made the biggest contribution to Group profits. Trading profit increased by 34% to £53.8 million, representing 29% of the Group total. The principal reason behind this profit improvement was the progress made in Instruments and Controls. This derived from the sharp recovery at Hawker Siddeley Dynamics Engineering and the increasingly important contribution from recent acquisitions in the USA. A solid advance was also made in Switchgear, Transformers and Engineering Contracting. Further growth is expected from this sector in 1989.

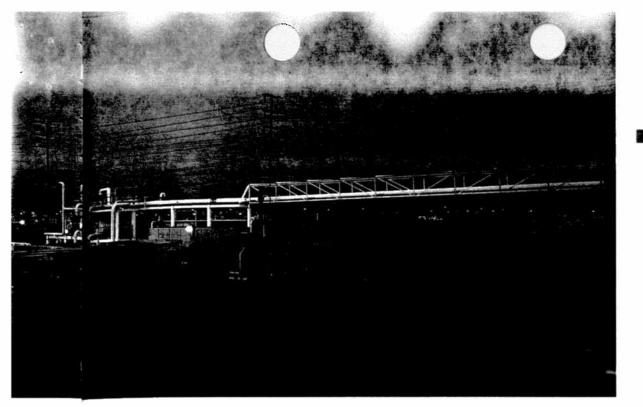
Engineering Contracting

The Group's Engineering Contracting business is mainly operated through Hawker Siddeley Power Engineering, which has bases in both the UK and USA. Substantially higher profits were attained in 1988, and the company started 1989 with a record orderbook. The company's market is worldwide, the main purpose being to obtain turnkey contracts which utilise equipment made by

other Group companies. During the year the company received the Queen's Award for Export Achievement for the second time. Advantage is being taken of the strong market for cogeneration installations in the USA, but electrical projects in the Third World are still being severely constrained by the lack of appropriate funding. Privatisation of the electricity supply industry in the UK is expected to offer a considerable opportunity for the Group to participate in the construction of new medium-sized power stations.

Switchgear

The Switchgear operations, which include fusegear, performed well in 1988. The fuse companies made a significant profit improvement. The recently acquired companies, Connectron in the USA and Dorman Fusegear in the UK, achieved particularly strong growth. Fuselinks for the protection of semiconductor devices continue to offer a good market. Research and development effort is being sustained at



a high level, and a new range of industrial fusegear, being introduced in 1989, is planned to provide a platform for further progress.

Brush Switchgear and South Wales
Switchgear benefited from a high level of
activity in the UK market from industry and
the electricity boards. The former also
obtained a major order from the Ministry of
Defence. Both companies are achieving
success with recently developed products,
whose market acceptance is growing
encouragingly. Although the export market
has been relatively dull, more stable
conditions in the Middle East are expected
to yield an improvement. The switchgear
units in Australia and Africa made small but
useful contributions to profits.

Transformers

All of the Group's transformer companies made progress in 1988, with South Wales Transformers having a particularly good year. Its strong order intake included export contracts for Africa, the Middle East and Far East. For Brush Transformers, the distribution

transformer market in the UK was buoyant but this was partly offset by a decline in mining and lower exports. Technical advances included seismically tested transformers for critical environments and vibration tested transformers for oil rigs. Hawker Siddeley Power Transformers started to benefit from a healthy recovery in orders from the electricity generation industry. They were also helped by the launch of new tapchanger products which met an immediate demand. The African units, although relatively small, made a higher profit contribution.

Instruments and Controls

Efforts to expand the Group's activities in Instruments and Controls produced good results in 1988, and this segment yielded approximately 15% of the Group trading profit. Fasco's sensors and controls division, which was created at the beginning of the year, made good progress as the new operations acquired during the past three years were more fully integrated. Fasco Controls, at Shelby, North Carolina, produced

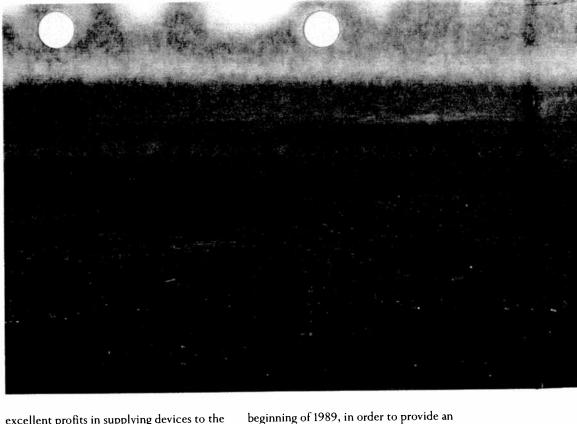
	1988	1987
	£m	£m
Sales	504	460
Trading		
Profit	53-8	40.2



The new Hong Kong Exhibition Centre is protected by Brush Switchgear vacuum circuit breaker switchboards.

HAWKER SIDDELEY

ELECTRICAL DISTRIBUTION ANDCONTROLS CONTINUED



A Hawker Siddeley **Dynamics Engineering** electronic governor and fuel valve system being commissioned at a gas turbine gas pumping station in the USA.

Main Picture

Turkey's national electricity generation and transmission network is monitored and controlled by computer systems supplied and installed by Westinghouse Systems.

excellent profits in supplying devices to the automotive market and has emerged as sole supplier of certain key components to the major US vehicle manufacturers. Elmwood Sensors, which has factories in the USA and in the UK, launched several new heat monitoring and control devices and this enabled increased sales into Japan. Electro, in Sarasota, Florida, successfully integrated new product lines into its plant and now offers a broad spectrum of sensors. Early in 1989 the range was extended through the purchase of OptoSwitch, a small manufacturer of optical sensors near Dallas, Texas.

Crompton Parkinson Instruments continued to expand, particularly in North America with the benefit of earlier acquisitions. Profitability has been strengthened through efficient manufacturing operations in the UK, Singapore, USA and Barbados. Growth was pursued by the successful development of new products using the latest electronic technology. At the

improved response to market demand, Crompton Parkinson Instruments was reorganised as Hawker Measurement & Control comprising two separate businesses: Hawker Instruments is now responsible for the manufacturing companies and Hawker Instrumentation Supplies is responsible for the worldwide distribution companies. Hawker Instruments established a Japanese manufacturing subsidiary, Crompton Alps, following the purchase of the meter division of Alps Electric Instrument Co. in January 1989.

Good progress was achieved by the other Instruments and Controls companies. Hawker Siddeley Dynamics Engineering returned to profitable trading under new management. There was strong demand from the defence and industrial control markets and an increase in the order-book augurs well for the future. Daytronic Corporation started the year with a slow inflow of orders and made lower profits, but better performance is



expected to result from the further development of its microprocessor-based data acquisition systems. The latest line, the versatile 4000 series, can easily be programmed for a variety of tasks, whilst the system 10 product family was enhanced by a touchscreen graphics capability. Dranetz Technologies, of Edison, New Jersey, acquired in September 1988, brings to the Group a leading position in state-of-the-art electrical instruments. The company is a product leader in instruments for tracking power transmission failures, supporting industrial energy management, testing standby batteries and analysing power and other disturbances which upset computers and similar computer-based operations. Westinghouse Systems, in the UK, had another record year with the completion of three energy management systems in China and a second supervisory control and data acquisition system for Mercury Telecommunications. A full development

programme was actively pursued, and initial

he

orders were obtained for newly introduced automatic rail vehicle identification equipment.

Cables

Crompton Parkinson Cables had some major successes in export markets and maintained its activity in the domestic market. Profit was again higher, despite steep raw material cost increases. The ongoing programme to improve efficiency and to enhance the technological base continued successfully. Early in 1989, agreement was reached with Delta plc for the merger of the Group's cable operations with those of Delta to form a strong UK company which will be better equipped to take advantage of the opportunities arising from the single European market. The Group has a 36% shareholding in Delta Crompton Holdings, the merged business.



Crompton Parkinson cables were supplied for the Beijing Hotel, People's Republic of China.

ELECTRICAL SPECIALISED EQUIPMENT

Batteries

Oldham Crompton
Batteries Ltd
K.W. Battery Company
Oldham France SA
Tungstone Batteries Ltd
Tungstone Energy
Products Ltd
Crompton Vidor Ltd
Power Conversion Inc

Raii Equipment

Brush Electrical
Machines Ltd
Dimetronic SA
Westinghouse Brake &
Signal Ltd
Westinghouse Brake &
Signal Co (Australia) Ltd
Safetran Systems Corporation

Lighting and Other Activities

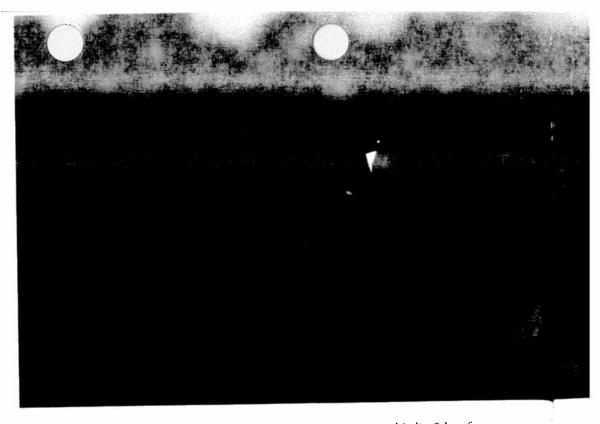
Crompton Lighting Ltd Crompton Stud Welding Ltd Westcode Semiconductors Ltd



The British Aerospace 146 uses aviation batteries manufactured by Tungstone Energy Products.

Main Picture

The AR5 air crew respirator system, in service with the US Marine Corps, is powered by special kalium batteries made by Crompton Vidor.

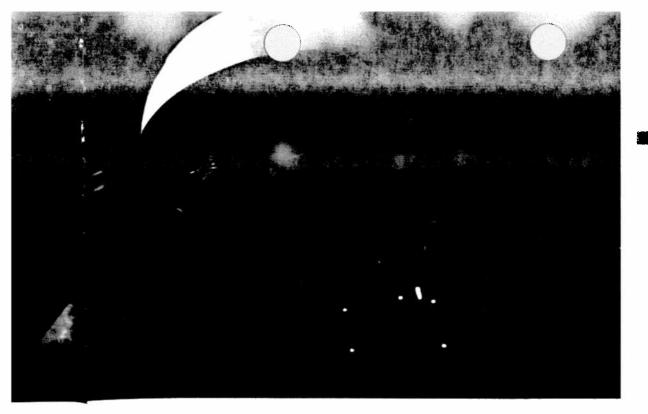


1988 was a mixed year for the Electrical Specialised Equipment sector, although the profits from Rail Equipment improved as a result of the turnaround at Westinghouse Signals. Overall, trading profit increased by 10% to £32.9 million. The outlook for 1989 is more promising. The order-books for rail equipment are significantly higher, largely as a result of the locomotive order from British Rail, whilst it is confidently expected that management changes in certain of the battery companies will yield better results.

Batteries

In the rechargeable battery market
the Group is one of Europe's leading
manufacturers with factories in Britain and
France marketing throughout the Continent.
The Group also manufactures rechargeable
batteries in the USA and, through minority

shareholdings, in Spain and India. Sales of industrial batteries were strong, and Oldham France in particular had another good year. The purchase in March of Gates Energy Products (Acton), subsequently renamed Tungstone Energy Products, provides the Group with new technology and the opportunity to enter the market for aircraft batteries. Good progress was made in integrating this company and obtaining the necessary product approvals. Early in 1989, the automotive battery operations of Oldham Crompton Batteries and Tungstone Batteries were rationalised by centralising the distribution and service. Automotive battery manufacture will be progressively transferred into Tungstone's Market Harborough factory. The individual brands should benefit from focusing their resources. KW Battery, in the



USA, returned to profitable trading.

In primary batteries, Crompton Vidor consolidated its position as one of the leading brands in the UK consumer market. During the year the company made a major investment in the manufacture of the increasingly popular alkaline batteries. In the industrial and defence market, product development helped to widen the range of lithium batteries for electronic memory back-up, and exports continued to expand. Power Conversion, in the USA, had a difficult year, but management changes aimed at yielding an improvement were made at the start of 1989. The company retained its position as the largest producer of lithium batteries for US military applications, and the new facility in Puerto Rico received government approval for a lithium reserve

cell. Thermal batteries were also added to the product range.

Rail Equipment

It was a year of consolidation for the railway signalling operations, with worldwide activity relatively quiet. Westinghouse Signals, in the UK, returned to profit. A successful year saw the public opening of the first phase of the signalling and train control systems for Singapore Mass Transit Corporation and the completion of a major subcontract for the supply of automatic ticket machines and gates for London Underground. In the USA, Safetran Systems Corporation continued to achieve good trading profits. The company made further penetration into the growing mass transit market, whilst continuing to strengthen its position in highway level crossing equipment. Significant annual purchase

	1988	1987
	£m	£m
Sales	338	326
Trading		
Profit	32.9	29.8



For the French section of the Channel Tunnel, Oldham France secured a £2 million contract for traction batteries, chargers and charging facilities.

HAWKER SIDDELEY

ELECTRICAL SPECIALISED EQUIPMENT CONTINUED



commitments from major railroads, coupled with an aggressive research and development programme, place the company in a strong position in its market.

Dimetronic maintained its growth in a competitive environment within Spain.

Contracts were successfully completed for the signalling of the first phase of the new Valencia Metro and for the automatic monitoring and regulation of buses in Barcelona. In Australia, the signal division of Westinghouse Brake & Signal Company (Australia) faced a low level of demand, but broadened its marketing base to include South East Asia. Good progress was made with electronic security equipment produced by Ness Security.

Products arising from the co-operative

research and development effort into second generation, processor-based signalling systems and into train-borne communication systems are expected to play a growing part in the signalling companies' business in the future.

Westinghouse Cubic, jointly owned with Cubic Corporation of the USA, made a useful profit contribution as it reached the final stage of its contracts for the installation of automatic ticket machines and gates at most London Underground stations. Attention is now being directed to the utilities market, light-rail ticketing equipment and toll systems.

The traction division of Brush Electrical Machines experienced a difficult year following the completion of some major orders. However, activity progressively improved when the company secured the



Australian rail engineers, Westinghouse Brake & Signal, recently completed work on the Aberdeen-Werris Creek centralised train control system in New South Wales.

Main Picture

The Helsinki Metro, Finland, uses distributed gate high frequency thyristors manufactured by Westcode Semiconductors.



order from British Rail for 100 Class 60 freight locomotives. Continuity orders were also received for electrical propulsion equipment.

Lighting and Other Activities

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Crompton Lighting had another good year.

Continuing investment was made in high technology manufacturing plant to enhance the efficiency of the manufacture of lamps and luminaires. Many new product lines were launched, and the marketing team was restructured and redirected to obtain greater coverage.

Westcode Semiconductors commissioned its new factory at Chippenham and achieved record sales of silicon power semiconductor devices. Exports increased substantially to Europe, the USA and the Far East and comprised 80% of sales. With an extended

product range, the company is set to continue its penetration of international markets.

In the manufacture of fasteners and equipment for applying them, Crompton Stud Welding continued to grow satisfactorily.



The 18th century Culzean Castle in Scotland is floodlit by luminaires manufactured by Crompton Lighting.

DIESEL ENGINEERING

The improvement anticipated for 1988 in for the efficient manufacture of these new

Small Engines

Lister-Petter Ltd Hawker Siddeley Power Plant Ltd Onan Corporation (related company)

Large Engines

Mirrlees Blackstone (Stamford) Ltd Mirrlees Blackstone (Stockport) Ltd



The Scottish Health Authority's mobile breast screening units use Hawker Siddeley Power Plant diesel generating sets.

Main Picture

Five Mirrlees Blackstone MB430 diesel engines produce a total of 47-5 MW at the diesel power generating station at Pulrose on the Isle of Man. The improvement anticipated for 1988 in Diesel Engineering was not fully realised, but nonetheless trading profits rose by 7% to £14.7 million. The prospects for 1989 are considerably brighter as the year opened with stronger order-books and an improved level of activity in most units in this sector.

Small Engines

Lister-Petter continued to improve its trading performance with a better directed sales effort and better control of manufacturing costs. The new Alpha range of engines, which offers the customer advantages in terms of design, noise levels and ease of servicing, was well received in the market place. There are nine models, including both air-cooled and water-cooled versions, covering a power range from 6 to 41 brake horsepower, and the potential application has thus been broadened into a much wider range of mobile equipment.

Substantial investment was made at Dursley

engines. The company also benefited from more favourable conditions in the UK and North American markets. After a difficult period, Hawker Siddeley Power Plant returned to profit in 1988 as the company began to obtain the benefit from rationalising its facilities. There was a strong demand for marine engines, whilst in the generating set market a substantial contract was obtained from British Telecom for sets powered by Lister-Petter's new Alpha engines.

Trading results at Onan Corporation (36% owned) were disappointing with profit below that of 1987 following the resolution of a long standing legal dispute and the costs associated with introducing an additional product line. Onan, which is jointly owned with Cummins Engine Company, is based in the USA, where consumer demand continued to be strong for generating sets for the motor home and pleasure marine markets and also



for gasoline engines sold to the turf maintenance market. Sales of industrial generating sets increased substantially in both the US and international markets with the addition of Cummins-labelled products sold through Cummins Engine distributors. Onan's UK subsidiary, Newage Engineers, a ising leading alternator manufacturer, continued to improve its profit.

Large Engines

The profitability from large diesel engines came under pressure through funding difficulties in Third World countries in a highly competitive market. However, Mirrlees Blackstone (Stockport), at the top end of the range, ended the year with orderbooks at a record level. The 100 Class 60 freight locomotives ordered by British Rail will be powered by MB275 engines produced at Stockport, and the larger MB430 engine is proving to be a competitive engine for power generation. Mirrlees Blackstone (Stamford),

at the lower end of the Group's heavy diesel range, made only a small contribution to profit but is developing a new range of improved performance engines for the industrial market. Both of the main support companies, Hawker Siddeley Engineering in Australia and Hawker Siddeley Diesels & Electrics in Canada, produced higher profits.

	1988	1987
	£m	£m
Sales	191	154
Trading		
Profit	14.7	13.7



Boats in the New Bedford fishing fleet in the USA use Lister-Petter diesel engines for auxiliary power.

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MECHANICAL SPECIALISED EQUIPMENT

Raii Equipment

Westinghouse Brake & Signal Ltd Westinghouse Brake & Signal Co (Australia) Ltd Canadian Steel Wheel CGTX Inc

Aerospace Equipment

HDA Forgings Ltd Hawker Pacific Pty Ltd Hawker de Havilland Ltd Insumat Ltd Orenda

Mining Equipment

Dosco Overseas
Engineering Ltd
Hollybank Engineering
Co Ltd
Hawker Noyes Pty Ltd

Other Activities

Canadian Steel Foundries
Lister Shearing Equipment
Ltd
Kockums CanCar
Gardiner, Sons & Co Ltd
Saro Products Ltd
Bunnings Ltd
(related company)



CGTX Inc tank and hopper cars are leased to the petrochemical, fertiliser and food industries in Canada.

Main Picture

Some 39 Sikorsky Black Hawk helicopters are being built by Hawker de Havilland for the Royal Australian Air Force.



The Mechanical Specialised Equipment activities had a disappointing year. Good progress in rail equipment was offset by lower profits from aerospace equipment. Overall, trading profit fell by 2% to £42·7 million.

Better trading figures are expected in 1989 although in general the trading environment continues to be more difficult than in the electrical sectors.

Rail Equipment

CGTX, which operates a leasing fleet of tank and hopper cars and is 55% owned by Hawker Siddeley Canada, continued to make the biggest contribution to the Rail Equipment profits. The fleet was well utilised and the market for new cars was active, CGTX being successful in securing long term leases for the major share of business available. This high level of activity was matched by the company's three maintenance depots across Canada. The improved market buoyancy in Canada also benefited Canadian Steel Wheel. The business returned to profit on the strengthening demand for wheels for both

new rolling stock and maintenance spares.

In the UK, Westinghouse Brakes attained further growth with continuing improvement in the home market and the diversification of its product base. The rail systems division, purchased in 1987, which supplies communications equipment, did well, and the widening of the product range by the introduction of air conditioning, heating and ventilation equipment for rail vehicles, resulted in significant orders. In the USA, additional substantial orders were received from New York City Transit Authority for door operating equipment. Benefits started to flow from the rationalisation programme in Australia, implemented at the end of 1987. The railway brake business held its own in a flat market and the other transport related products of Westinghouse Brake & Signal Company (Australia) secured a significant trading improvement.

Aerospace Equipment

The Aerospace Equipment companies made a lower contribution to Group profit as



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a result of lower profits in Canada and the UK. Australian-based Hawker de Havilland continued to improve both sales and profits. Output of PC9 training aircraft and Black Hawk helicopters for the Australian Defence Forces reached full production status. Continuing export growth, based primarily on airframe and engine component manufacture for the booming civil airline market, won for Hawker de Havilland the Australian government's Bicentennial Export Award. Hawker de Havilland Victoria, in Melbourne, won a major contract to convert Roval Australian Air Force Boeing 707 aircraft for aerial refuelling. In December, as part of a policy to increase the scope of its aerospace support activities, Hawker de Havilland purchased Australian Aviation College, which is based near Adelaide and specialises in the training of airline pilots.

Hawker Pacific continued to develop its aviation marketing and support activities, which are now evenly divided between Australia, Asia and the USA. In Australia the

operations were expanded in Cairns, Brisbane, Melbourne and Perth and the year ended with a contract to supply and maintain five VIP aircraft for the Australian government. In Asia trading was buoyant in Korea, Japan and China, and the operations were expanded by two small acquisitions: Arabian Aviation, a helicopter distributor in Bahrain, in February, and Aeronautical Maintenance Services, engaged in airframe overhaul in Singapore, in September. In the USA the landing gear and hydraulic overhaul operations improved.

HDA Forgings, in the UK, enjoyed a healthy demand for general forgings, particularly precise-to-form forgings for the airframe industry, but this was offset by a cutback in the demand for compressor blades. Insumat, which supplies thermal and acoustic insulation products for aerospace applications, also experienced a phasing back of customer requirements and had a disappointing year. Their new factory at Biggleswade was brought into operation, and the company should benefit from improved

	1988	1987
	£m	£m
Sales	492	460
Trading		
Profit	42.7	43.6



Large precise-to-form forgings are manufactured by HDA Forgings for Boeing C17 and 747 aircraft.

MECHANICAL SPECIALISED EQUIPMENT CONTINUED



facilities and a better order-book.

In Canada, Orenda experienced a lower level of demand for subcontract components, but made good progress in reorganising operations to reflect the shift in manufacturing load from component production to a higher level of repair and overhaul work on engines for the Canadian Armed Forces. However, labour unrest towards the end of the year severely reduced output and profitability. During the year the demand for aeronautical and industrial gas turbine engine spare parts was strong.

Mining Equipment

Profits from Mining Equipment were maintained in the face of difficult market conditions. Dosco and its subsidiary
Hollybank Engineering, although based in the UK, form part of Hawker Siddeley Canada.
Reorganisation within British Coal, the major customer for their mining and tunnelling machines and roof support systems, had an effect upon procurement and repair policies in the early part of the year. Activity

improved as the year progressed, helped by Dosco's new contract hire scheme for equipment purchases. At mid-year Dosco acquired the small mining contracting unit of Matthew Hall Mining in Yorkshire, and contracts negotiated since its purchase provide a promising outlook.

Buoyant conditions in opencast mining and quarrying in Australia benefited Hawker Noyes. The MC Komatsu division, which sells and services Komatsu earthmoving equipment in Western Australia and the Northern Territory, performed particularly well, obtaining some sizeable orders from the gold mines. The building and industrial division took advantage of strong market conditions in the building industry for its metals and engineering products. In August, Hawker Noyes expanded its heavy machinery business with the purchase of Austral Mining, a small but leading manufacturer of rock crushing plant and machinery based in Queensland.

Other Activities

The Agricultural and Forestry Equipment



At Manville Forest Products in Arkansas, Kockums lumber processing machinery maximises timber yield.

Main Picture

A Dosco TB 2000 mining machine at British Gypsum's mine at Barrow-on-Soar in the UK.



operations in Canada, the USA and the UK maintained their recovery in 1988 and yielded an overall profit. The Kockums CanCar units in Canada and the USA achieved a significant increase in sales of their sawmill and lumber processing equipment. In May, Hawker Siddeley Canada purchased the outstanding 20% minority shareholding in both companies.

In the UK, Lister Shearing Equipment continued to make progress. The planned programme of product enhancement should strengthen the future growth potential.

The Australian group, Bunnings, in which the Group has a 24·1% shareholding had another good year. Based in Perth, Bunnings is not only the largest hardwood sawmiller in Australia, but also has extensive facilities for the processing and distribution of both hardwoods and softwoods, as well as a chain of twenty five stores selling timber and hardware products. The company has an active growth strategy, which yielded a pre-tax profit improvement of 26% in 1988.

Canadian Steel Foundries had another disappointing year. An upturn in market demand for steel castings improved the activity level, but pricing pressures were intense and margins continued to be unsatisfactory.

Gardiner, Sons & Co., the west country retailer, made the progress which had been anticipated, particularly at its main store in Bristol, with a good demand for home improvement products such as kitchens, bathrooms and furnishings. Saro Products, which manufactures plastic sheeting and containers on the Isle of Wight, made further progress.



Three Beechcraft King Air aircraft, fitted for aeromedical work, have been supplied to the New South Wales Air Ambulance Service by Hawker Pacific.

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DISCONTINUED ACTIVITIES

During the year certain peripheral businesses were sold. These companies contributed £9·1 million to the Group trading profit compared with £8·5 million in 1987.

The largest of these companies, Invergordon Distillers had a record year, but in response to an attractive offer from a company formed by its management the Group's 64·6% shareholding was sold in November for £60 million.

PowerTech, a small, specialised US business making high performance power transistors, which did not fit in with other units in the Group, was also sold to its management in November.

The transport refrigeration and water engineering businesses, which it was considered would have better prospects in other groups, were also sold, Hawker Siddeley Water Engineering in May, Petter Refrigeration in August and Hawker Siddeley Brackett in November.

A decision was also taken to divest Tree
Farmer Equipment Company, a US subsidiary
of Hawker Siddeley Canada. This company
manufactures log-skidder vehicles and other
forest harvesting equipment, and a generally
dull market demand encouraged heavy
discounting and made trading unprofitable.

The Directors submit their annual report and the audited accounts for the year ended 31st December, 1988, which will be laid before the shareholders at the Annual General Meeting to be held on 21st June, 1989.

Group results and dividends

The accounts of the Group appear on pages 29 to 43. The turnover and trading profit of each of the major business segments in which the Hawker Siddeley Group operates are set out in the Financial tables on page 6.

The dividends already paid or recommended are as follows:

	1988 £m	1987 £m
On 5½% cumulative preference shares	0.2	0.2
On ordinary shares: Interim of 8-4p per share paid on 30th December, 1988 (1987: 5-5p)	16·6	10.8
Recommended final of 14·1p per share to be paid on 5th July, 1989 (1987: 13·5p)	27.8	26.6
	44.6	37.6

Principal activities and business review

A review of operations during 1988 and of the future development of the Group, including details of significant changes in activities, is contained in the Chairman's statement on pages 2 and 3, in the Chief Executive's review on pages 4 and 5 and in the Review of operations on pages 7 to 24.

Directors

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The Directors of the Company are shown on the inside front cover and the interests of the Directors in office on 31st December, 1988 are given on page 42. The Board knows of no contract of significance in relation to the business of the Company and its subsidiaries in which any Director has a material interest.

Since the year end, Mr. C. Hampson and Dr. A. K. Watkins have been appointed to the Board with effect from 1st February, 1989 and 1st May, 1989 respectively; in accordance with the Articles of Association they will retire from office at the Annual General Meeting and, being eligible, each will offer himself for re-election.

Mr. D. G. Bury, Mr. Quinton Hazell and Mr. T. W. B. Sallitt will retire by rotation at the Annual General Meeting and, being eligible, each will offer himself for re-election.

The unexpired period of the service contract with the Company of Mr. D. G. Bury and Mr. T. W. B. Sallitt is 2 years 9 months in each case. The service contract of Dr. A. K. Watkins will be for a period of 3 years from his date of appointment, 1st May 1989. Mr. C. Hampson and Mr. Quinton Hazell do not have service contracts with the Company.

Charitable and political contributions

Contributions to charities in the United Kingdom made during the year by the Group amounted to £148,600 (1987: £114,600). In 1988, the Group contributed £7,000 (1987: £7,000) to the Economic League, and £500 (1987: £500) to Common Cause, which might be held to fall within the definition of political contributions for the purpose of Section 235(3) of the Companies Act 1985.

Research and development

There is a continuing programme of research and development aimed at the improvement of existing products, introduction of new ones and better production methods in the Group's factories; further information is provided in the Review of operations.

Auditors

The Auditors, Price Waterhouse, have indicated their willingness to continue in office and a resolution for their reappointment will be submitted to the Annual General Meeting.

REPORT OF THE DIRECTORS OF HAWKER SIDDELEY GROUP PLC REPORT OF THE DIRECTORS OF HAWKER SIDDELEY GROUP PLC CONTINUED

Employment policles

The policy and practice of each subsidiary company covering the arrangements for communication and consultation with employees and for the employment of the disabled has been developed in response to the particular situation pertaining at each site. Each subsidiary company in the UK with more than 250 employees sets out the relevant details in its Directors' Report which is filed with the Registrar of Companies. Details from the Report filed by any subsidiary company may be obtained on application to the Group Secretary.

The Code of Conduct for Companies with interests in South Africa issued (in revised form) by H.M. Government in July, 1986 calls for an annual statement as at 30th June each year. A copy of this document is forwarded to the Department of Trade and Industry and a copy of the latest statement is available on request from the Secretary, Hawker Siddeley Group PLC.

Changes in Group structure Harowe Servo Controls

On 23rd March, 1988, the Group purchased the business of Harowe Servo Controls from Bowmar Instrument Corporation for \$5.7m in cash. Harowe, which is based in West Chester, Pennsylvania, manufactures subfractional horsepower electric motors and servo rotary components.

Trenton Works, Hawker Siddeley Canada Inc

On 31st March, 1988, this division of Hawker Siddeley Canada was sold to Lavalin Trenton Works Inc.

Gates Energy Products (Acton) Ltd

On 31st March, 1988, the Group purchased Gates Energy Products (Acton) from The Gates Corporation for £4.4m in cash. The renamed Tungstone Energy Products Ltd has expanded the Group's battery interests into the manufacture of sealed lead-acid batteries for aircraft and high performance industrial applications.

Hawker Siddeley Water Engineering Limited

On 26th May, 1988, the Group sold this company to The Jones Group plc.

Von Weise Gear Company

On 13th June, 1988, the Group purchased Von Weise Gear, a privately owned USA corporation, for \$25m in cash. Von Weise Gear, based in St. Clair, Missouri, manufactures fractional horsepower gearmotors and gear reducers. The acquisition is seen as a natural extension of Fasco's electric motor business.

Petter Refrigeration Limited

On 3rd August, 1988, the Group sold this company to Thermo King Corporation.

Dranetz Technologies, Inc

On 22nd September, 1988, the Group acquired Dranetz Technologies, through a cash tender offer of \$50.2m. Dranetz Technologies, based in Edison, New Jersey, manufactures precision electronic instrumentation products and power monitoring equipment.

Hawker Siddeley Brackett Limited

On 14th November, 1988, the Group sold this company to Sutcliffe Speakman PLC.

Invergordon Distillers (Holdings) Public Limited Company

On 30th November, 1988, the Group sold its 64·65% shareholding in Invergordon, through a recommended offer. The offer by DMWS 99 PLC, a company formed to effect a management buy-out, valued Invergordon at £93m and Hawker Siddeley's shareholding at £60m.

Delta Crompton Holdings Limited

With effect from 1st January, 1989, the Group merged its cable and wire activities with those of Delta plc in a new company, Delta Crompton Holdings Ltd. The Group has a 36% shareholding in Delta Crompton Holdings, reflecting the profits and assets contributed to the

merger, and has an option in 1992 to increase the shareholding to 49% at a price based on the first three years' trading profits. The scale of the merged company's operations is such as to maximise competitiveness, particularly in the European market.

OptoSwitch, Inc

On 20th January, 1989, the Group purchased OptoSwitch, Inc., a privately owned USA corporation, for an amount in cash of up to \$6.3m, depending on profitability in the four years following acquisition. The company's manufacture of optical sensors is being integrated in Electro Corporation, part of Fasco's sensors and controls division.

K.K. Crompton Alps

On 31st January, 1989, the Group purchased the meter division of Alps Electric Instrument Co. Ltd. for Yen 250m. Based in Nakajyo, Japan, Crompton Alps manufactures panel meters and measuring instruments.

SenSym, Inc

On 28th March, 1989, the Group acquired SenSym, a privately owned USA corporation, for \$14.4m in cash. SenSym manufactures a range of solid state pressure transducers at its facility in Sunnyvale, California. The acquisition will bring further solid state pressure sensor technology to Fasco's sensors and controls division.

Significant shareholdings

At 19th April, 1989, the Directors were not aware that any person or group held an interest amounting to as much as 5% of the ordinary share capital of the Company.

By Order of the Board D. R. Gilbert, Secretary 19th April, 1989 REPORT OF THE DIRECTORS OF HAWKER SIDDELEY GROUP PLC CONTINUED

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REPORT OF THE AUDITORS

To the members of Hawker Siddeley Group Public Limited Company

We have audited the financial statements on pages 29 to 43 and page 6 in accordance with approved Auditing Standards.

In our opinion the financial statements give a true and fair view of the state of affairs of the Company and the Group at 31st December, 1988 and of the profit and source and application of funds of the Group for the year then ended and comply with the Companies Act 1985.

Price Waterhouse, Chartered Accountants Southwark Towers, 32 London Bridge Street, London SE1 9SY 19th April, 1989 The Group comprises Hawker Siddeley Group Public Limited Company (Hawker Siddeley) and its subsidiaries. The principal accounting policies, set out below, have remained unchanged from the previous year.

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t convention as modified

Accounting convention. The accounts have been prepared under the historical cost convention as modified by revaluations of certain properties and investments.

Consolidation principles. The consolidated accounts include the accounts of Hawker Siddeley and its subsidiary companies, and those of related companies, on the basis described below. The accounts of all subsidiaries are made up to 31st December. The principal operating companies are listed on pages 46 to 50. The effective date for consolidation of companies acquired is that on which an offer is declared unconditional in all respects. The results of companies disposed of are consolidated up to the date of disposal.

Goodwill, being the excess of the cost of an acquisition over the fair value of the relevant net assets, is charged to reserves.

The Group's share of the profits and net assets of related companies, not being subsidiaries, in which a substantial interest is held for trading and commercial reasons, has been included in the consolidated accounts based on the audited accounts of these companies made up to varying accounting dates in 1988. Details of related companies are included on pages 46 to 50.

Translation of foreign currencies. The assets and liabilities of overseas subsidiaries have been expressed in sterling at the rates ruling at 31st December, 1988.

Trading results of overseas subsidiaries have been expressed at the average of the rates ruling during the year. Differences arising from the effect of changes in exchange rates on overseas net assets are treated as a movement in reserves.

Turnover is sales to third parties and is determined by reference to the selling values of goods delivered and services rendered during the year.

Trading profit (other than on long-term contracts) is taken up when goods are delivered and title passes to the customer or when services are rendered, and is stated after making allowance for the estimated cost of after sales service and other expenditure to be incurred subsequently. In the case of long term contracts, namely those extending over more than one year, a prudent level of profit attributable to the proportionate deliveries is taken up if the final outcome of such contracts can be reliably assessed.

On all contracts full provision is made for any losses in the year in which they are first foreseen.

Research and development expenditure other than that specifically recoverable under contracts is written off in the year in which it is incurred.

income from investments. Dividends received from UK investments are included at the amount received together with the imputed tax credit. Income received from overseas investments is credited before deducting withholding taxes.

Tangible fixed assets and depreciation. Freehold and long leasehold properties acquired before 31st December, 1983 are stated at valuation at that date; subsequent additions and all other fixed assets are stated at cost to the Group, after deducting government grants received. The basis of depreciation is to write off the cost or valuation of buildings where appropriate, and the cost less government grants of other assets over their estimated useful lives on a straight line basis.

The rates of depreciation vary according to the type of asset and business but are in general: freehold buildings - 2%; leasehold buildings where the lease is 50 years or more - 2%; leasehold buildings where the lease is for less than 50 years - over the term of the lease; plant and machinery - 10% or 20% according to the nature of the asset.

Stock and work in progress is stated at the lower of cost (including an appropriate proportion of overheads) and estimated realisable value, less progress payments. The estimated realisable value has been arrived at having regard to estimated costs to completion of contracts.

Deferred taxation. Provision is made for deferred taxation arising from timing differences to the extent that the liability will become payable in the foreseeable future. Timing differences are due primarily to the excess of tax allowances on fixed assets over the corresponding depreciation charged in the accounts. No provision is made either for the potential tax on capital gains which would arise in the event of disposal of properties at their valued amounts or for tax which might be payable in the event of distribution of retained profits of overseas subsidiaries or related companies.

ACCOUNTING POLICIES CONSOLIDATED
PROFIT AND
LOSS ACCOUNT

For the year ended 31st December, 1988	Notes	1988	1987
		£m	£m
Turnover	1	1,868	1,743
Trading profit excluding related companies		173-1	150-4
Add: Share of profits of related companies		10-5	12.0
Group trading profit	2	183-6	162-4
Add: Interest	3	0-1	0.8
Profit on ordinary activities before taxation		183-7	163-2
Less: Taxation on profit on ordinary activities	4	62-0	58.9
Profit on ordinary activities after taxation	- Amyle	121.7	104.3
Less: Interest of minority shareholders		10-8	8.6
Group profit after taxation attributable to Hawker Siddeiey		110-9	95·7
Add (Less): Extraordinary items after taxation	5	10-9	(10.7)
		121-8	85-0
Less: Dividends	6	44-6	37.6
Amount retained and employed in the Group		77-2	47.4
Earnings per ordinary share	7	56-2p	48·5 _]

CONSOLIDATED

BALANCE SHEET

At 31st December, 1988	Notes	1988 £m	1987 £m
Fixed assets			ZIII
Tangible assets	11	4 4 6·2	422-4
Investments	13	61.3	52.2
		507.5	474.6
Current assets			
Stocks	14	427-0	415-4
Debtors	15	448-4	421.1
Bank deposits and other short term investments		224.8	160-3
Cash at bank and in hand		34.9	31.2
		1,135-1	1,028.0
Creditors: amounts falling due within one year			
Loans and overdrafts	16	23.3	22.0
Trade creditors		217-4	180-9
Other creditors	18	272-0	245.7
		512-7	448.6
Net current assets		622-4	579.4
Total assets less current liabilities		1,129-9	1,054.0
Representing: Creditors: amounts falling due after more than one year	Saporas		
Debenture stocks and loans	19	138-2	123.6
Other long term liabilities	20	30-6	27.3
Provisions for liabilities and charges	21	88-3	77-8
Deferred taxation	22	5-2	8:8
nterest of minority shareholders		87-2	95-2
Capital and reserves			
Called up share capital	24	55-3	55-2
hare premium account		22-8	22.2
Revaluation reserve	25	67-2	70.5
Profit and loss account	26	635-1	573-4
hareholders' funds		780-4	721-3
		1,129-9	1,054-0

Sir Peter Baxendell, Chairman
B.R. Bensly Managing Director and Chief Executive
D.G. Bury, Finance Director

1987

£m

150.4

12.0

162.4

0.8

163-2

58.9

104.3

8.6

95.7

(10.7)

85.0

37.6

47.4

3.5p

SOURCE AND **APPLICATION** OF FUNDS

			Action to the same of
SOURCE AND	For the year ended 31st December, 1988	1988	1987
APPLICATION	•	£m	£m
OF FUNDS	Source of funds		
OF FUNDS	Profit before taxation	183·7 52·3	163·2 52·0
	Depreciation and amounts written off fixed assets	(8.6)	(5.6)
	Profits retained by related companies	(0-0)	(3.0)
	Extraordinary items not resulting in movement of liquid funds	(11-9)	(13.3)
	Share capital issued	0.7	
	Proceeds on disposal of subsidiaries	70-6	-
	Sales of tangible fixed assets and investments	17-9	12.6
	8	304-7	208-9
	Less: Taxation paid	57-3	55.6
	Less, taxation para		
	Total source of funds	247-4	153-3
	A		ž.
	Application of funds	88-5	57
	Capital expenditure Cost of businesses acquired in the year	51-8	65.
	Dividends paid to shareholders of Hawker Siddeley	43-4	34.6
	Dividends paid to minority shareholders	3-6	3.4
	Increase (decrease) in working capital:		
	Stocks	31-3	12.3
	Debtors	22-0	16.7
	Trade and other creditors	(54-6)	(20-8)
	Provisions and other long term liabilities	17-6	5-1
	Total application of funds	203-6	173-9
	Generation (Absorption) of funds	43-8	(20-6)
	Representing:		
	Net funds at 1st January	45-9	46-4
	Effect of changes in exchange rates	8-5	20-1
3			
		54-4	66-5
	Generation (Absorption) – as above	43-8	(20-6)
	Net funds at 31st December	98-2	45-9
# _	The movements do not correspond to the changes shown on the		
	face of the balance sheet due to the effects of eliminating exchange rate differences.		
			- 5%
ž	Cost of businesses acquired in the year:		
	Tangible fixed assets (note 11)	9-2	11-2
	Goodwill (note 26)	33-3	43.4
	Stocks	11-0	17.1
	Debtors	7-4	14-4
	Creditors	(9.1)	(20.6)
		51-8	65.5

1	Turnover	1988	1987
	The analysis of Group turnover by activity is as shown in the	£m	£m
	Financial tables on page 6 and the analysis by geographical		
	markets is as follows:	(P(500
	United Kingdom USA	656 497	590 456
	Australasia	229	211
	Europe	147	132
	Far East	105	94
	Canada	102	103
	Africa	62	60
	Middle East	50	75
	South and Central America	20	22
	·	1,868	1,743
2	Group Trading Profit		
	The analysis of Group profit by activity is as shown in the Financial tables on page 6 and is arrived at after charging:		
	Wages and salaries	461-7	447-2
	Social security costs	38.9	36.7
	Other pension costs	14-2	14.6
	Staff costs	514.8	498.5
	Changes in stocks of finished goods and work in progress	(34.5)	(14.2)
	Raw materials and consumables	838-2	757.0
	Other external charges	332-0	303.5
	Depreciation and amounts written off fixed assets	52.3	52.0
	and after crediting:		
	Surplus on property disposals	7.7	3.9
	Income from investments:	4.7	1.0
	Listed (including £1.7m (1987: £1.0m) from related companies) Unlisted (including £0.2m (1987: £5.4m) from related	1.7	1.0
	companies)	0.4	5.7
	Included in the amounts charged above are the following items: Hire of plant and machinery	5.7	5.4
	Rental of premises	8.8	8.9
	Auditors' remuneration	2.3	2.2
	-		
	Amounts relating to finance leases are not material in the		
	context of the Group and the amounts shown above for hire of plant and machinery and for rental of premises represent the		
	total charged in respect of all leases.		
3	Interest		
	Receivable on bank deposits and other short term investments	20-9	20.4
	Less payable on:		
	Debenture stocks of Hawker Siddeley	0-6	0.7
	Loans repayable over a period longer than five years	9·1	7.4
	Loans wholly repayable within five years	5-4	5.1
	Bank loans and overdrafts	5.7	6.4
	-	20-8	19.6
		0-1	0.8
		<u> </u>	0.0

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2·3 5·7 3·8) 5·1

3.9

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)·6) ·5 NOTES TO THE CONSOLIDATED ACCOUNTS

NOTES TO THE CONSOLIDATED ACCOUNTS CONTINUED

	Taxation on Profit on Ordinary Activities	- * 4988	1987
7	laxation on Front on Ordinary Activities	£m	£m
	Corporation tax at 35%	38-3	33.6
	UK deferred taxation	(2-9)	(4.9)
	Double taxation relief	(1-4)	(4.8)
	Overseas taxation	24-2	30-1
		58-2	54.0
			310
	Related companies:		
	Corporation tax	0.5	0.1
	Overseas taxation	3.3	4.8
		3-8	4.9
		62-0	58.9
5	Extraordinary Items		
•	Disposal of Invergordon Distillers	26-1	
	Other disposals and closures of businesses including Tree		
	Farmer Equipment	(12-3)	(12.8)
		13-8	(12-8)
	Tax (including deferred tax of £(0.4)m - 1987: £0.8m)	(5.9)	1-9
	lax (including deferred tax of £(0.4)iii = 1767; £0.6iii)	STATE OF THE STATE	W. C
		7-9	(10.9)
	Minority interest	3-0	0.2
		10-9	(10.7)
6	Dividends		
	On 5½% cumulative preference shares (3.85% net of tax)	0.2	0-2
	On ordinary shares:		
	Interim of 8-4p per share paid on 30th December, 1988		
	(1987: 5·5p)	16-6	10-8
16. 4g	Recommended final of 14-1p per share to be paid on		
	5th July, 1989 (1987: 13·5p)	27-8	26.6
		44-6	37-6
7	Earnings per Ordinary Share		
	Earnings per ordinary share amount to 56-2p (1987: 48-5p).		
	The calculation is based on earnings of £110-7m (1987: £95-	im),	
252	as shown below, and 197-1m ordinary shares being the average	e .	
	number in issue throughout the year.		
	Group profit after taxation attributable to Hawker Siddeley a		
	shown in the consolidated profit and loss account	110-9	95.7
	Less: Preference dividend	0-2	0.2
	Earnings	110-7	95.5

	Emoluments of the Directors of Hawke	er Siddeley	1988 £000	1987 £000
	Aggregate emoluments:		45	3.5
	Fees Management remuneration and pension sch	eme contributions	42 785	35
	Pensions paid in respect of former Directors		170	860 23
	r	,	997	918
,	The numbers of Directors whose emolumer	nts, excluding		
	pension scheme contributions, fell within v			
	are shown in the following table:	C	1988	1987
		Emoluments	1,750	1707
	£ 5	,001 - £ 10,000	_	4
	£ 10	,001 -£ 15,000	4	-
	£ 65	,001 - £ 70,000	_	3
		,001 - £ 75,000	1	2
		,001 - £ 80,000	_	1
		,001 - £ 90,000	2	
		,001 - £ 95,000	_	i
		,001 - £100,000	2	_
		,001 - £120,000 ,001 - £155,000	1	
		,	-	
	The emoluments included above For the Chairman were:		(35 000	652.506
			£75,000	£72,500
1	For the highest-paid Director were:		£154,365	£118,438
7	Emoluments of Employees in the Unite The number of employees of the Group in tl Kingdom, excluding Directors of Hawker Si	he United		
T k v		he United ddeley, me	1988	1987
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Si whose emoluments, excluding pension sche contributions, exceeded £30,000 is shown i	he United ddeley, me n the	1988	1987
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Si whose emoluments, excluding pension sche contributions, exceeded £30,000 is shown it following table:	he United ddeley, me n the Emoluments	1988 56	
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Si whose emoluments, excluding pension sche contributions, exceeded £30,000 is shown it following table:	he United ddeley, me n the		56
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Si whose emoluments, excluding pension sche contributions, exceeded £30,000 is shown is following table: £ 30, £ 35,	he United ddeley, me n the Emoluments 001 - £ 35,000	56	5 <i>6</i> 12
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signhose emoluments, excluding pension sche contributions, exceeded £30,000 is shown it following table: £ 30, £ 35, £ 40,	he United ddeley, me n the Emoluments 001 - £ 35,000 001 - £ 40,000	56 27	56 12 17
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature and the Kingdom, excluding Directors of Hawker Signature and the Kingdom, excluding pension sche contributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50,	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 50,000	56 27 16	56 12 17 8
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature and the Kingdom, excluding Directors of Hawker Signature and Excluding pension scheontributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 55,	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 50,000 001 - £ 55,000	56 27 16 8 8 3	56 12 17 8 4
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of the Kingdom, excluding Directors of Hawker Signature of the Kingdom, excluding pension sche contributions, exceeded £30,000 is shown it following table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 55, £ 60,	Emoluments 001 - £ 35,000 001 - £ 45,000 001 - £ 50,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000	56 27 16 8 8 3 2	56 12 17 8 4
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of the Kingdom, excluding Directors of Hawker Signature of the Kingdom, excluding pension sche contributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 60, £ 65,	Emoluments 001 - £ 35,000 001 - £ 45,000 001 - £ 50,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000	56 27 16 8 8 3	56 12 17 8 4
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of the Kingdom, excluding Directors of Hawker Signature of the Kingdom, excluding pension scheme contributions, exceeded £30,000 is shown it collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 60, £ 65, £ 70,	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 50,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000	56 27 16 8 8 3 2	56 12 17 8
I k v	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of the Kingdom, excluding Directors of Hawker Signature of the Kingdom, excluding pension scheme contributions, exceeded £30,000 is shown it collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 60, £ 65, £ 70,	Emoluments 001 - £ 35,000 001 - £ 45,000 001 - £ 50,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000	56 27 16 8 8 3 2	56 12 17 8 4
	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of Employees and the Group in the Kingdom, excluding Directors of Hawker Signature of Employees of Hawker Signature of Hawker Signatur	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000 001 - £ 75,000	56 27 16 8 8 3 2	56 12 17 8 4
A A	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of Employees emoluments, excluding pension scheontributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 55, £ 60, £ 65, £ 70, £ 75, Analysis of Average Number of Employed analysis by activity:	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000 001 - £ 75,000	56 27 16 8 8 3 2 2 1	56 12 17 8 4 3 — 1
T is a constant of the constan	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of English the Group in the Kingdom, excluding Directors of Hawker Signature of English the Group in the Kingdom, excluding pension sche contributions, exceeded £30,000 is shown it following table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 55, £ 60, £ 65, £ 70, £ 75, £ 70, £ 75, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £ 75, £ 60, £ 65, £ 70, £ 75, £	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000 001 - £ 75,000	56 27 16 8 8 3 2 2 1 1	56 12 17 8 4 3 1
F AA A E E	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of Excluding Directors of Hawker Signature of Excluding pension scheontributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 55, £ 60, £ 65, £ 70, £ 75, Analysis of Average Number of Employer analysis by activity: Electric motors and generators lectrical distribution and controls	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000 001 - £ 75,000	56 27 16 8 8 3 2 2 1 1	56 12 17 8 4 3 — 1 — 7,500 11,900
T is a constant of the constan	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of Eventributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 55, £ 60, £ 65, £ 70, £ 75, Analysis of Average Number of Employed analysis by activity: Electrical distribution and controls electrical specialised equipment	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000 001 - £ 75,000	56 27 16 8 8 3 2 2 1 1 1	7,500 11,900 7,900
A A E E E D	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of Excluding Directors of Hawker Signature of Excluding pension scheontributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 55, £ 60, £ 65, £ 70, £ 75, Analysis of Average Number of Employed analysis by activity: Electric motors and generators electrical distribution and controls electrical specialised equipment Diesel engineering	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000 001 - £ 75,000	56 27 16 8 8 3 2 2 1 1 1	7,500 11,900 7,900 4,100
THE VOICE OF SECTION AS A SECULAR SECU	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of English the Contributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 55, £ 60, £ 65, £ 70, £ 75, Analysis of Average Number of Employed analysis by activity: Electric motors and generators Electrical distribution and controls Electrical specialised equipment Diesel engineering Mechanical specialised equipment	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000 001 - £ 75,000	56 27 16 8 8 3 2 2 1 1 1	7,500 11,900 7,900 4,100 9,500
A A E E E D M C	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of English whose emoluments, excluding pension sche contributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 60, £ 65, £ 70, £ 75, Analysis of Average Number of Employed analysis by activity: Electric motors and generators electrical distribution and controls electrical specialised equipment Diesel engineering electrical specialised equipment continuing businesses	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000 001 - £ 75,000	56 27 16 8 8 3 2 2 1 1 1 8,600 12,100 7,600 4,100 9,600	7,900 4,100 9,500 40,900
T I I V C C G G G G G G G G G G G G G G G G G	The number of employees of the Group in the Kingdom, excluding Directors of Hawker Signature of English the Contributions, exceeded £30,000 is shown is collowing table: £ 30, £ 35, £ 40, £ 45, £ 50, £ 55, £ 60, £ 65, £ 70, £ 75, Analysis of Average Number of Employed analysis by activity: Electric motors and generators Electrical distribution and controls Electrical specialised equipment Diesel engineering Mechanical specialised equipment	Emoluments 001 - £ 35,000 001 - £ 40,000 001 - £ 45,000 001 - £ 55,000 001 - £ 60,000 001 - £ 65,000 001 - £ 70,000 001 - £ 75,000	56 27 16 8 8 3 2 2 1 1 1	7,500 11,900 7,900 4,100 9,500

\$87 £m 3.6 4.9) 4.8) 0.1 4.0

0.1 4.8 4.9 8.9

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\frac{1.9}{0.9}, \\
\frac{0.2}{0.7}, \\$

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NOTES TO THE CONSOLIDATED ACCOUNTS CONTINUED

10	Analysis of Average Number of Emp	loyees con	tinued	1988	1987
	Geographical analysis:	•			
	United Kingdom			23,000	23,300
	North America			11,900	11,800
	Australasia			5,100	5,000
	Other			2,900	2,600
				42,900	42,700
			e e e e		
11	Tangible Fixed Assets	Freehold	Leasehold	Plant and	
		property	property	machinery	Total
		£m	£m	£m	£m
	Cost or valuation:				
	At 31st December, 1987	185-2	24.9	510-5	720-6
	Effect of changes in exchange rates	6.2	1.1	24-1	31.4
	Additions at cost less government grants	4.2	1.8	80-9	86.9
	Cost of assets of acquisitions in year	1.0	lavar - wil	8.2	9.2
	Disposals	(23.2)	(3.4)	(46.3)	(72.9)
	At 31st December, 1988	173-4	24-4	577-4	775-2
	Accumulated depreciation:				*
	At 31st December, 1987	11.9	3.3	291-3	306.5
	Effect of changes in exchange rates	0.4	0-2	12.4	13.0
	Charge for year	3.4	1.4	47-5	52.3
	Disposals	(1.4)	(0.7)	(32-0)	(34-1)
	At 31st December, 1988	14-3	4-2	319-2	337-7
	Net book amount at 31st December, 1988	159-1	20-2	258-2	437-5
	Jigs, tools and equipment at cost less				
	amounts written off				8-7
					446-2
	Net book amount at 31st December, 1987	173-3	21.6	219-2	414-1
	Jigs, tools and equipment at cost less				
	amounts written off				8-3
				55	422-4
		Vende to			

The parent company tangible fixed assets comprise freehold property with a valuation and depreciation of £7·1m and £0·5m (1987: £7·1m and £0·4m) respectively, and plant and machinery with a cost and depreciation of £2·0m and £1·3m (1987: Nil) respectively.

Freehold and long leasehold properties include £144·1m (parent company £7·1m) which were valued at 31st December, 1983, the original cost of which was £89·9m (parent company £1·4m).

The original cost to the Group	of land and buildings and the	
depreciation thereon are as fol	lows: 1988	1987
		£m
Cost	143.6	151-1
Depreciation	36-5	34-9
Net book amount	107/1	116-2

Leasehold property includes short-term leases at a net book amount of £4-0m (1987: £2-5m).

11 Tangible Fixed Assets continued

Leasing operations.

987

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otal £m

10.6 11.4 16.9

9.2

(2.9)

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16.5

3·0 (2·3 (4·1) (**7·7**

8·7 |6·2

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987 £m 1·1 4·9 6·2 The Group's Canadian subsidiary, CGTX Inc (55% owned by Hawker Siddeley Canada Inc), is in the business of leasing railway rolling stock to North American railroad operators.

Amounts included in plant and machinery:	1988 £m	1987 £m
Cost	127-4	90.1
Accumulated depreciation	44-2	38.2
Net book amount	83-2	51.9
Pledged as security for mortgage equipment notes (see note 19)	48-0	24.9
Rental income from these operations included in sales	19.8	17.9

12 Capital Commitments

Commitments of the Group for capital expenditure not included in the balance sheet at 31st December, 1988 amounted to £34m (1987: £33m); capital expenditure authorised by the Directors but not committed at 31st December, 1988 amounted to approximately £79m (1987: £70m).

13	Fixed Asset Investments	Rela comp		Oth investr		Tot	al
		1988 £m	1987 £m	1988 £m	1987 £m	1988 £m	1987 £m
	Cost or share of net assets Less: Amounts written off	59·5 —	50·7 —	2·7 0·9	2·4 0·9	62·2 0·9	53·1 0·9
	Net book amount	59-5	50.7	1.8	1.5	61.3	52.2
	Increase in net book amount in 1988: Effect of changes in exchange rates Additions Share of related companies' retained reserves Net book amount of disposals	2·8 0·7 5·7 (0·4) 8·8		- 0·5 - (0·2) 0·3		2·8 1·2 5·7 (0·6) 9·1	
	Included in the net book amounts shown above are investments listed on recognised stock exchanges outside the UK of whose market values were	24·9 41·0	19·4 22·7	0·1 0·3	0·1 0·3		
	Other investments - unlisted: Aggregate profits less losses attributable to the Group in respect of accounts received in 1988: Before tax After tax Accumulated undistributed profits less losses since acquisition attributable to the Group					0·6 0·4	0·4 0·3

NOTES TO THE CONSOLIDATED ACCOUNTS CONTINUED

14	Stocks		1988	1987
			£m	£m
	Raw materials and consumables		124-2	113-3
	Long term contract work in progress		223-5	210-9
	Other work in progress		137-6	118.0
	Finished goods and goods for resale		157-8	178-9
		20170.07	643-1	621-1
	Less: Progress payments less attributable profits		216-1	205.7
			427-0	415.4

The replacement cost of stocks is not materially different from the amounts stated above.

15 Debtors

Trade debtors	371.6	355-4
Amounts owed by related companies	08	0.8
Other debtors (including £16.0m (1987: £1	4·2m) falling due	
after more than one year)	60-2	47.6
Prepayments and accrued income	15-8	17.3
	448-4	421-1

16 Loans and Overdrafts

Debenture stocks and loans	32	3-4
Bank loans and overdrafts		8.6
	23-3	2.0

17 Bank Guarantees and Contingent Liabilities

Hawker Siddeley has guaranteed bank overdrafts of certain subsidiaries which at 31st December, 1988 amounted to £9.7m (1987: £3.8m). There are contingent liabilities arising in the ordinary course of business relating principally to bonds outstanding and claims involving products manufactured or distributed by the Group, but in the opinion of the Directors adequate provision has been made for losses which might fall on the Group.

18 Other Creditors

67-9	53.0
3-9	2.2
54-4	48.9
7.9	7-0
41-3	44-2
68-7	63.7
27-9	26.7
272-0	245.7
	3-9 54-4 7.9 41-3 68-7 27-9

19	Debenture Stocks and Loans	1	988	1	987
	Repayable over a period longer than	£m	£m	£m	£m
	five years				
	Borrowings of subsidiaries:				
	US\$ Commercial paper		63-2		60-6
	Mortgage equipment notes - secured on railway rolling stock leasing fleet (see note 11)		44.5		44.0
	Due by instalments between 1989 and 2000		11.5		11.9
	interest rates vary between 74% and 114%				
	Other borrowings (secured £7.7m - 1987: £7.9m)		11-3		12.0
	o and o one an algo (cooled and of the local of the				
			86-0		84.5
	Repayable within five years				
	Borrowings of Hawker Siddeley:				
	71/4% Debenture stock 1989/92 (secured)	15-6		15.6	
	8¾% Debenture stock 1989/92 (secured) Less: Redeemed to date and cancelled	2.8		2.8	
	Less: Redeemed to date and cancelled	(10-1)		(9.2)	
			8-3		9.2
	US\$50m 13¼% Notes due 1991	27.6		26.6	
	Bank loans	1-4		1.5	
			29-0		28-1
			37.3		37.3
	Borrowings of subsidiaries:				
	Mortgage equipment notes - secured on				
	railway rolling stock leasing fleet (see note 11)		15.1		1.0
	Other borrowings				
	(secured £2·7m - 1987: £4·3m)		4-6		8.2
			57-0		46.5
	Total debenture stocks and loans		143-0		131.0
	Less: Instalments repayable within one				
	year, included in current liabilities		4-8		7.4
			138-2		123-6
	Representing instalments repayable:		Jin.		
	Between one and two years hence		5-3		3.5
	Between two and five years hence		57-6		45.9
	In five years or more		75-3		74-2
			138-2	7	123-6

The aggregate amount of bank loans and overdrafts was £20.8m (1987: £19.4m).

Redemption of the Hawker Siddeley Debenture stock is by annual sinking funds of £0·3m $(7\frac{1}{4}\% \text{ stock})$ and £0·06m $(8\frac{3}{4}\% \text{ stock})$. At the option of the Company this obligation may be satisfied by purchase on the market.

Commercial paper is short term borrowings issued at a discount in the commercial paper markets in Europe. However, for balance sheet purposes, this paper is classified as a long term liability as it is the intention to renew the borrowings as they fall due, or to refinance the borrowings through existing long term bank facilities. This paper is guaranteed by Hawker Siddeley.

NOTES TO THE CONSOLIDATED ACCOUNTS CONTINUED

20	Other Long Term Liabilities		1988 £m	1987 £m
	Taxation		26-7	22.1
	Other creditors		3-9	5.2
			30-6	27-3
21	Provisions for Liabilities and Charges	Other		
		provisions	Pensions	Total
		£m	£m	£m
	At 31st December, 1987	74-4	3-4	77-8
	Effect of changes in exchange rates	2-2	0-1	2.3
	Amounts set aside in 1988	45-5	0.4	45.9
	Expenditure in 1988	(37-2)	(0.5)	(37-7)
	At 31st December, 1988	84-9	3-4	88-3

Other provisions include after sales service and reorganisation.

The Group operates a number of pension schemes throughout the world covering the majority of its employees. Most of the schemes are of the defined benefit type which relate benefits to pay near to retirement. The majority are funded by means of assets built up in separate trusts, administered by trustees.

Members of the principal pension scheme in the UK paid contributions as prescribed by the Rules and the balance of the cost of funding the benefits was borne by the Group. Since 1st July, 1986, the members' and companies' contributions have been equal. This scheme is valued by consulting actuaries at three-yearly intervals. The provision in the balance sheet of £3.4m mainly relates to the outstanding liability on unfunded obligations entered into in previous years in respect of subsidiaries in North America. There are pension commitments to past Directors amounting to £23,000 per annum which are not included in provisions.

22	Deferred Taxation		1988	1987
			£m	£m
	In respect of capital allowances	72.00	13-3	15.5
	Other UK timing differences Advance corporation tax		(3.9)	(2·6) (8·9)
	UK corporation tax		2:7	4-0
	Overseas taxation		2.5	4-8
			5-2	8-8

There is deferred taxation of £26.7m (UK £9.3m; Overseas £17.4m) not provided in the accounts as this relates to timing differences for which no liability will become payable in the foreseeable future.

23 Event Subsequent to the Balance Sheet Date

With effect from 1st January, 1989, the Group merged its cable and wire activities with those of Delta plc in a new company, Delta Crompton Holdings Ltd. The Group has a 36% shareholding in Delta Crompton Holdings, reflecting the profits and assets contributed to the merger, and has an option in 1992 to increase the shareholding to 49% at a price based on the first three years' profits.

Included in the consolidated balance sheet at 31st December, 1988, are net assets valued at £31.7m which have subsequently been transferred at book value to Delta Crompton Holdings Ltd.

24	Share Capital of Hawker Siddeley	Αι	thorised	Allotted and fully pa	
		1988	1987	1988	1987
		£m	£m	£m	£m
	5½% cumulative preference				
	shares of £1 each	6-0	6.0	6-0	6.0
	Ordinary shares of 25p each	65-0	65.0	49-3	49.2
		71-0	71.0	55-3	55.2

Issued during the year

During the year, 133,431 ordinary shares of 25p each were issued following exercise of options under the Executive Share Option Scheme, Overseas Executive Share Option Scheme and Savings Related Share Option Scheme. The aggregate consideration received in respect of these allotments was $\pm 0.7m$.

Shares under option

The options to subscribe for ordinary shares of 25p held by Group employees were as follows:

	,
Options lapsed (149,748) (22 At 31st December, 1988 1.365,482 89	

Options under the Executive Schemes are normally exercisable 3–10 years after grant and are currently exercisable at various dates up to 1998 at prices ranging between £4·55 and £6·16.

Options under the Savings Related Scheme are normally exercisable 5 years after grant and are currently exercisable at various dates up to 1993 at prices ranging between £4 \cdot 05 and £5 \cdot 50.

25	Revaluation Reserve	Hawker		Related	
		Siddeley	Subsidiaries	companies	Total
	er ii	£m	£m	£m	£m
	At 31st December, 1987	5.5	61.9	3.1	70.5
	Effect of changes in exchange rates	_	1.3	0.8	2.1
	Valuation in year	_	_	1.3	1.3
	Transfer to profit and loss account in				
	respect of depreciation and disposals	(0.1)	(6.4)	(0.2)	(6.7)
	At 31st December, 1988	5-4	56-8	5-0	67-2
26	Profit and Loss Account	Hawker		Related	
		Siddeley	Subsidiaries	companies	Total
		£m	£m	£m	£m
	At 31st December, 1987	75.4	474.0	24.0	573.4
	Exchange differences on translation				
	of net assets	(1.7)	23.9	2.3	24.5
	Amount retained in 1988	0.1	72.7	4.4	77-2
	Goodwill on acquisitions:				
	During the year		(33.3)	_	(33.3)
	Prior years		(13.4)	_	(13.4)
	Transfer from revaluation reserve	0.1	6.4	0-2	` 6·7 [′]
	At 31st December, 1988	73-9	530-3	30-9	635-1

NOTES TO THE CONSOLIDATED ACCOUNTS

27 Approval of Financial Statements

These financial statements were approved by a duly appointed and authorised committee of the Board of Directors on 19th April, 1989.

28	Directors' Interests in S	hares of Hawk	er Sidd	leley		*Option subscrib	
		Preferen	ce	Ordin	ary	ordina	ury
		shares		share	3	share	s
		1988		198	3	198	8
	- 1-25	31st Dec.	lst Jan.	31st Dec.	1st Jan.	31st Dec.	1st Jan.
	Sir Lindsay Alexander	250	250	1,000	1,000		-
	Sir Peter Baxendell	_	計 -	5,000	5,000	-	_
	Mr B.R. Bensly	450	450	200	200	81,260	81,260
	Mr B.M. Bonfield	_	_	4,000	4,000	53,610	53,610
	Mr D.G. Bury	_		200	200	33,233	22,759
	Sir James Hamilton	_	- T	500	500	· *.	<u> </u>
	Mr Q. Hazell		46	5,000	5,000		. <u> </u>
	Mr T.W.B. Sallitt	450	450	200	200	40,461	28,855
	Mr R.A. Willford	450	450	200	200	33,988	46,185
	Sir Rowland Wright			2,000	2,000	January i 🗕	

^{*}These options are held under the Executive Share Option Scheme. In addition, at 31st December, 1988 Mr D.G. Bury and Mr T.W.B. Sallitt each held options over 1,701 ordinary shares under the Savings Related Share Option Scheme. (See note 24.) All the above interests are beneficial. There have been no changes in Directors' interests between 31st December, 1988 and the date of this Report.

OTHER INFORMATION

Dividend and interest payment dates

74% Debenture stock
8¾% Debenture stock
5½% Cumulative preference shares
US\$50m 1314% Notes due 1991
Ordinary shares: In respect of the year ended
31st December, 1988
Interim dividend (8.4p per share)
Recommended final dividend (14-1p per share

30th June and 31st December 30th June and 31st December 1st February and 1st August 20th September

30th December, 1988 5th July, 1989

Number of share and debenture holders	At 31st D	ecember
	1988	1987
Ordinary shareholders	31,800	33,100
Preference shareholders	900	1,000
Debenture holders	1,200	1,300
	33,900	35,400

Capital gains tax

For the purposes of capital gains tax, the market values of Hawker Siddeley's shares were as follows:

Ordinary shares	5½% Cumulative
	preference shares
371∕2p	.74p
299p	35½p
ne and Corporation	
leley	
	299p ne and Corporation

At 31st December, 1988	Notes	1988	1987
Fixed assets		£m	£m
Tangible assets	11	7-3	6.7
Investments in subsidiaries	11	70·5	70·7
A		77.8	77.4
Amounts owed by Group companies		247.0	202 5
Loan accounts (repayable on demand) Loan accounts (repayable 1990)		316-8	283.5
Loan accounts (repayable 1990)		27-6	26.6
		344-4	310-1
Current assets			
Amounts owed by Group companies		44-0	45.4
Advance corporation tax recoverable		60-9	59·1
Other debtors		2-3	4.0
Bank deposits and other short term investments		1.9	4.5
Cash at bank and in hand		9-0	3.3
		118-1	116.3
Creditors: amounts falling due within one year			
Amounts owed to Group companies		13.3	
Loans and overdrafts		3.2	3.6
Taxation		14-8	13.0
Dividends		27-9	26.7
Other creditors		4-3	6.6
		63-5	49-9
Net current assets		54-6	66.4
Total assets less current liabilities		476-8	453.9
Representing: Amounts owed to Group companies			
Loan accounts (repayable on demand)		283-4	259.8
Creditors: amounts falling due after more than on	A VAST		
Debenture stocks and loans	-,	36-0	35.8
Capital and reserves			
Called up share capital	24	55-3	55•2
Share premium account		22.8	22.2
Revaluation reserve	25	5-4	5.5
	26	73-9	75.4
	20		
Profit and loss account Shareholders' funds		157-4	158-3
Profit and loss account		157-4	158-3

PARENT COMPANY BALANCE SHEET

In accordance with Section 228(7) of the Companies Act 1985 no separate profit and loss account has been presented for the parent company.

Sir Peter Baxendell, Chairman

B.R. Bensly, Managing Director and Chief Executive

D.G. Bury, Finance Director

FIVE YEAR REVIEW

	1988	1987	1986	1985	1984
	£m	£m	£m	£m	£m
Turnover					
UK companies - Home	647	582	547	543	483
UK companies - Export	327	340	358	336	336
	974	922	905	879	819
Overseas companies	894	821	703	713	705
	1,868	1,743	1,608	1,592	1,524
Trading Profit					
Electric motors and generators	30-4	26-6	22.2	20-3	16.8
Electrical distribution and controls	53⋅8	40-2	34-0	30-9	22.0
Electrical specialised equipment	32.9	29-8	27-9	25-2	18.0
Diesel engineering	14-7	13.7	7-2	16-1	30-1
Mechanical specialised equipment	42.7	43.6	45.2	47-7	40.3
Discontinued activities	9-1	8.5	7.9	9-2	6.8
Trading profit	183-6	162-4	144-4	149-4	134.0
Interest	0-1	0-8	7.7	10-9	9.0 €
Profit before taxation	183.7	163.2	152-1	160-3	143.0
Taxation and minority interests	72.8	67.5	64.7	65-3	61.0
Profit attributable to Hawker Siddeley	110-9	95.7	87-4	95.0	82.0
Capital Employed	41 1 67				
Shareholders' funds	780-4	721-3	760-5	821-6	875-2
Minority interests	87 ∙2	95.2	102-9	102-7	119.3
Deferred taxation	5∙2	8.8	9.3	16.4	20.6
Debenture stocks and loans	138-2	123-6	155-9	85.6	111-1
Payments received on account	67-9	53.0	45-4	33-0	23-9
Liquid resources*	(236-4)	(169-5)	(202·3)	(241-9)	(222-1)
	842-5	832-4	871-7	817-4	928-0
Represented by:		in in the second		Zenego.	
Fixed assets	507-5	474-6	519-5	531-0	625-1
Net current assets (including					
provisions and other long term					
liabilities)	335-0	357-8	352-2	286-4	302-9
	842-5	832-4	871-7	817-4	928-0
Statistics					
Percentage trading profit to					
- Total capital employed	21-8%	19.5%	16.6%	18-3%	
- Total turnover	9-8%	9.3%	9.0%	9-4%	8.8%
Earnings per ordinary share	56-2p	48-5p	THE OWNER WAS TRANSPORTED TO THE PARTY.	48·1p	41-5p
Dividend per ordinary share	22·5p	19-0p	17-0p	14-5p	11.8p
		15-11-1-11-11-11-11	TALL THE SECTION		

Note

* Liquid resources comprise bank, cash and short term investments less loans and overdrafts repsyable within one year.

Managing Director & Chief Executive	B.R. Bensly	
Group Director	B.M. Bonfield	
Group Executive	P. Howard	Brook Crompton Parkinson Motors Ltd
Group Executive	F.W. Mack	Fasco Motors
Group Executive	W.J. Richardson	Fasco Sensors and Controls Hawker Batteries Ltd
Group Finance Director	D.G. Bury	
Group Director	T.W.B. Sallitt	Brush Fusegear Ltd Brush Fuses Inc HDA Forgings Ltd Hawker Siddeley Power Engineering Ltd Mirrlees Blackstone (Stamford) Ltd Mirrlees Blackstone (Stockport) Ltd
Group Executive	B.S. Price	Hawker de Havilland Ltd Hawker Noyes Pty Ltd Hawker Pacific Pty Ltd
Group Director	R.A. Willford	Hawker Siddeley Power Plant Ltd Insumat Ltd Lister-Petter Ltd Westcode Semiconductors Ltd Westinghouse Systems Ltd
Group Executive	H.R. Grant	Dimetronic SA Safetran Systems Corporation Westinghouse Brake & Signal Ltd Westinghouse Brake & Signal Co (Australia) Ltd
Group Executive	R.P. Hampson	Brush Electrical Machines Ltd Brush Switchgear Ltd Brush Transformers Ltd Hawker Siddeley Electric Africa (Pty) Ltd Hawker Siddeley Power Transformers Ltd Hawker Siddeley Switchgear Pty Ltd South Wales Electric (Pvt) Ltd South Wales Switchgear Ltd
Group Executive	B.G. Shoosmith	Crompton Lighting Ltd Crompton Vidor Ltd Daytronic Corporation Dranetz Technologies Inc Hawker Instrumentation Supplies Ltd Hawker Siddeley Dynamics Engineering Ltd Power Conversion Inc
Executive	R.D. Cole	Hawker Siddeley Canada Inc

Central Office Executives

Group Chief Accountant
K.J. Chave, FCCA
International Sales
G.T. Checketts, CBE, BSC, CEng, MIEE
Group Treasurer
J. Hume, FCA

Economic Appraisal R.D. Knott Group Central Services J.A. Locke, DMS, MBCS Group Planning R.B. McDaniel, MA, ACIS

PRINCIPAL **OPERATING** UNITS, CHIEF EXECUTIVES AND MAIN PRODUCTS

Electric Motors and Generators

Smail Machines

Brook Crompton Parkinson Motors Ltd. Small Industrial Motor Division Huddersfield and Honley: Small integral horsepower ac electric motors.

P. Howard Chairman

G Oldroyd Managing Director

Fractional Motor Division Doncaster: Small power ac electric motors

P. Howard Chairman

R. Priestley Managing Director

Brook Crompton Controls Ltd. Wakefield: Motor starters, motor control systems, programmable controllers.

P. Howard Chairman

B. Holdsworth Director

Brook Crompton Parkinson Pty Ltd. Sydney, Australia: Electric motors.

B.S. Price Chairman

W.J. Wilson Managing Director

Fasco Motors Chesterfield, Ozark, Cassville, Eldon and Tipton, Missouri; Fayetteville, North Carolina, USA: Fractional horsepower electric motors, custom blowers and consumer and commercial products.

F.W. Mack Chairman

R.B. Karpen President

Harowe Servo Controls West Chester, Pennsylvania, USA; and St. Kitts, W1: Subfractional horsepower electric motors and servo rotary components.

R.B. Karpen Chairman and President

Torin Ltd. Swindon: Custom blowers and fans for electronics cooling and heating, ventilating and air conditioning applications.

R.B. Karpen Chairman

P. Dobson Managing Director

Von Weise Gear Company St. Clair, Missouri, USA: Fractional horsepower gearmotors and gear reducers. R.B. Karpen Chairman and President

Large Machines

Brook Crompton Parkinson Motors Ltd. Large Industrial Motor Division Guiseley: Large integral horsepower ac electric motors. P. Howard Chairman

J.R. Coldwell Director

Brush Electrical Machines Ltd. Industrial Division Loughborough: ac and dc motors and generators and associated control equipment for diesel and turbine drives.

R.P. Hampson Chairman

W.M.M. Petrie Managing Director

Hawker Siddeley Electric Africa (Pty) Ltd. Machines Division Germiston, South Africa: Electric motors, merchandising and servicing of electric motors and diesel engines.

R.P. Hampson Chairman

J.H. Annandale Managing Director

Crompton Greaves Ltd. § India (37.5%): Motors, transformers, switchgear, fusegear and lighting.

Large Machines continued

Kirloskar Electric Co Ltd. § India (20.3%): Motors, transformers, alternators and control gear.

Electrical Distribution and Controls

Engineering Contracting

Hawker Siddeley Power Engineering Ltd. Burton-on-the-Wolds. Subsidiary in USA: Project engineers for the design and construction of power generation and electrical transmission and distribution systems.

T.W.B. Sallitt Chairman

M.B. Page Managing Director

Switchgear

Brush Fusegear Ltd. Burton-on-the-Wolds: Industrial and semiconductor fuselinks and fusegear for high and low voltage systems.

T.W.B. Sallitt Chairman

R.E. Gibbons Managing Director

Brush Fuses Inc. Chicago, Illinois; Laurence Harbor, New Jersey, USA: Fuselinks and terminal blocks.

R.E.Gibbons Chairman

Brush Switchgear Ltd. Loughborough: Indoor and outdoor switchgear and medium voltage motor control gear.

R.P. Hampson Chairman

M.G. Simms Managing Director

South Wales Switchgear Ltd. Blackwood: Indoor and outdoor switchgear and medium voltage motor control gear. Line equipment.

R.P. Hampson Chairman

D.A. Whitaker Managing Director

Hawker Siddeley Electric Africa (Pty) Ltd. Switchgear Division Roodepoort, South Africa: Indoor and outdoor switchgear, motor control gear, overhead line equipment, on-load tapchangers and turnkey projects.

R.P. Hampson Chairman

J.H. Annandale Managing Director

Hawker Siddeley Switchgear Pty Ltd. Sydney, Australia: Manufacturers and distributors of electrical switchgear and control gear.

B.S. Price Chairman

J.A. King Managing Director

Transformers

Brush Transformers Ltd. Loughborough: Distribution transformers, cast resin and air cooled transformers, flameproof transformers for hazardous conditions, transformers for rail power equipment.

R.P. Hampson Chairman

M.F. Radcliffe Managing Director

South Wales Transformers Division Treforest: Distribution transformers for industrial and public utility supply.

R.P. Hampson Chairman

E. Owen Director and General Manager

Electrical Distribution and Controls continued

Transformers continued

Hawker Siddeley Power Transformers Ltd. Walthamstow: Larger power transformers for generation and transmission. On-load tapchangers and off-circuit tap selectors.

R.P. Hampson Chairman

T.D. Davies Managing Director

South Wales Electric (Pvt) Ltd.

Harare and Bulawayo, Zimbabwe: Transformers for transmission and distribution. High voltage switchgear. Merchandising and servicing of electric motors and diesel engines.

R.P. Hampson Chairman

J.P. Demblon Managing Director

Hawker Siddeley Electric Africa (Pty) Ltd. Transformers Division Wadeville, South Africa: Transformers for transmission and distribution and for specialised applications. Rectifiers and packaged sub-stations.

R.P. Hampson Chairman

J.H. Annandale Managing Director

Instruments and Controls

Hawker Instruments Inc. Witham, Singapore and USA: Electrical and electronic indicating and control instruments.

E. Tyson Chairman

P.E. Whybrow President

Hawker Instrumentation Supplies Ltd. Witham and subsidiaries in Australia, Europe, Far East and USA: Sales and distribution of instruments.

E. Tyson Chairman

K. Brooks Managing Director

Daytronic Corporation Dayton, Ohio, USA: Measurement and control instrumentation.

E. Tyson Chairman

D.S. Reeder President

Dranetz Technologies, Inc. Edison, New Jersey, USA: Precision electronic instrumentation products and power monitoring equipment.

E. Tyson Chairman

A. I. Dranetz President

Fasco Sensors and Controls Shelby, North Carolina, USA: Pressure and temperature controls.

F.W. Mack Chairman

D.L. Bennett President

Aerospace Avionics Inc. Bohemia, New York, USA: High technology electrical products primarily for aircraft applications.

D.L. Bennett Chairman

G.M. LaButti President

Clarostat Mfg Co. Inc. Dover, New Hampshire; Gorham, Richmond and Norway, Maine; Glendale, California, USA: Electronic components for instrumentation, sound reproduction and recording equipment, telecommunications, aerospace, automotive, computer and automation applications. D.L. Bennett Chairman

R.E. White Executive Vice-President

Instruments and Controls continued

Electro Corporation Sarasota, Florida, USA: Motion, presence and position-sensing components and equipment for the industrial, automotive, military and aerospace markets, photo-electric scanners and bar code equipment.

D.L. Bennett Chairman

B.E. Goble President

Elmwood Sensors Inc. Rhode Is. USA: Commercial and precision thermostats, and allied consumer and commercial products.

D.L. Bennett Chairman

D.H. Schneider President

Elmwood Sensors Ltd. North Shields: Thermostats, temperature transmitters and PTC thermistors for consumer and commercial applications.

D.L. Bennett Chairman

R.A.R. Krohn Managing Director

Hawker Siddeley Dynamics Engineering Ltd. Welwyn Garden City and Farmworth: Control and monitoring data transmission and automation systems for military and industrial applications, software design and consultancy service for minicomputer and microprocessor systems.

E. Tyson Chairman

J.R. Polden Managing Director

Westinghouse Systems Ltd. Chippenham: Computer-based supervisory and automation control equipment. Materials handling equipment. Mine transportation control systems and equipment. Marine and industrial pneumatic control equipment. R.A. Willford *Chairman*

D.E.G. Stark Managing Director

Cables

Delta Crompton Holdings Ltd. § UK (36·0%): Mains and general wiring cables.

Hawker Siddeley Electric Africa (Pty) Ltd. Crompton Parkinson Division Johannesburg, South Africa: Merchandising of electrical products. R.P. Hampson *Chairman*

R.G.H. Wiseman General Manager

Electrical Specialised Equipment

Batteries

Oldham Crompton Batteries Ltd. Denton, Manchester, and Newport, Gwent: Automotive, traction and mining batteries.

W.J. Richardson Chairman

G.R. Welchman Managing Director

Uniross Batteries Ltd. (70·0%) Nailsea, Bristol: Factoring of consumer battery-related products.

G.R. Welchman Chairman E.F. Upperton Managing Director

K.W. Battery Company Chicago, Illinois, USA:

Traction batteries. W.J. Richardson *Chairman*

M.J. Scrivener General Manager

Oldham France S.A. Arras, France: Traction and standby power batteries. Gas detection equipment.

W.J. Richardson Chairman

C. Dreulle Managing Director

PRINCIPAL OPERATING UNITS, CHIEF EXECUTIVES AND MAIN PRODUCTS CONTINUED

Electrical Specialised Equipment

continued

Batteries continued

Tungstone Batteries Ltd. Market Harborough: Automotive and standby power batteries. W.J. Richardson Chairman N.P. Dick Managing Director

Tungstone Energy Products Ltd. Acton: Sealed lead-acid batteries for aircraft and high performance industrial applications.

W.J. Richardson Chairman

M.B. Lees Managing Director

Crompton Vidor Ltd. Newton Aycliffe and South Shields:

Primary battery systems for consumer, industrial and military applications.

B.G. Shoosmith Chairman

P.J. Cohen Managing Director

Power Conversion, Inc. New Jersey, USA and Puerto Rico: Lithium batteries. B.G. Shoosmith Chairman P.J. Cohen President

Raii Equipment

Brush Electrical Machines Ltd. Traction Division Loughborough: Diesel electric locomotives, rail traction power equipment and control gear. R.P. Hampson Chairman W.M.M. Petrie Managing Director

Dimetronic S.A. (90·0%) Madrid, Spain: Railway signalling and automation systems and equipment. H.R. Grant *Chairman*

I. Martinez Gomez Managing Director

Westinghouse Brake & Signal Co (Australia) Ltd. Signal Division (85:0%) Melbourne, Australia: Railway signalling systems and equipment. Security systems. H.R. Grant Chairman

D.R.J. Allen Managing Director

Westinghouse Brake & Signal Ltd. Signal Division Chippenham: Railway signalling systems and equipment, train describers and automatic train control equipment.

H.R. Grant Chairman

J.R.C. Boulding Managing Director

Safetran Systems Corporation Minneapolis, Minnesota, USA: Railway signalling systems and equipment. Automatic level crossing systems. H.R. Grant Chairman P.L. Wheeler President

Lighting and Other Activities

Crompton Lighting Ltd. Doncaster, Guiseley and subsidiary in Australia: Tungsten filament, sodium, mercury and fluorescent luminaires and lamps. B.G. Shoosmith *Chairman*

W. Miller Managing Director

Crompton Stud Welding Ltd. Market Harborough: Nuts, welded fasteners and stud welding equipment. W.J. Richardson Chairman M.W. Mallen Director and General Manager

Lighting and Other Activities continued

Westcode Semiconductors Ltd. Chippenham: High power semiconductor devices. R.A. Willford Chairman C.V. Miles Managing Director

Diesel Engineering

Small Engines

Lister-Petter Ltd. Dursley and Swindon, subsidiaries in USA, Australia and Mexico: Medium and high speed diesel engines for industrial application. R.A. Willford *Chairman*

G. Howell Managing Director

Hawker Siddeley Power Plant Ltd. Thrupp: Diesel driven generating sets. Diesel engines for marine applications.

R.A. Willford Chairman

R.D. Brown Director and General Manager

Onan Corporation § USA (36.0%): Generating sets, petrol and diesel engines.

Large Engines

Mirrlees Blackstone (Stamford) Ltd. Stamford: Medium speed diesel and dual fuel engines for industrial traction and marine applications, diesel alternator sets for power stations, marine propulsion and auxiliary drives.

T.W.B. Sallitt Chairman

R.M. Kington Managing Director

Mirrlees Blackstone (Stockport) Ltd. Stockport: Larger medium speed diesel and dual fuel engines for industrial, traction and marine applications, diesel alternator sets for power stations, marine propulsion and auxiliary drives.

T.W.B. Sallitt Chairman

H. Watson Managing Director

Mechanical Specialised Equipment

Raii Equipment

Westinghouse Brake & Signal Ltd. Brake Division Chippenham: Compressed air and vacuum braking systems for freight, main line and rapid transit vehicles. Air, vacuum or electrical control of these systems. Railway doors and door operating systems. H.R. Grant *Chairman*

J.R.C. Boulding Managing Director

Westinghouse Brake & Signal Co (Australia) Ltd. Brake Division (85·0%) Brisbane and Sydney, Australia: Railway braking systems and equipment. Road braking equipment.

H.R. Grant Chairman

D.R.J. Allen Managing Director

Canadian Steel Wheel Division† Montreal, Canada: Wrought steel wheels for locomotives, freight and passenger railway cars.

M.J. Colman Vice-President

CGTX Inc.+ (55·0% owned by Hawker Siddeley Canada Inc) Montreal, Canada: Leasing of railway tank cars and special freight cars. Operation of service depots.

R.D. Cole Chairman J.C. Léger President

Mechanical Specialised Equipment

continued

Aerospace Equipment

HDA Forgings Ltd. Redditch and Smethwick: Forgings in aluminium alloys, titanium and special steels.

T.W.B. Sallitt Chairman

J.A. Halley Managing Director

Hawker Pacific Pty. Ltd. Sydney, Australia: Aviation sales and support, aviation spares distribution and aircraft engine overhaul.

B.S. Price Chairman

C.M. Ryland Managing Director

Hawker de Havilland Limited (70-0%) Sydney, Melbourne and Perth, Australia: Aircraft production. Aircraft engine assembly. Aircraft and aircraft component production. Aircraft modification, repair and overhaul.

B.S. Price Chairman

J.B. Hattersley Managing Director

Insumat Ltd. Gloucester: Thermal and acoustic insulation.

R.A. Willford Chairman

M.K. Bonehill Director and General Manager

Orenda Division† Toronto, Canada: Aircraft gasturbine repair, overhaul and component manufacture, engineering laboratories and graphics services. R.J. Munro Vice-President

Mining Equipment

Dosco Overseas Engineering Ltd.† Tuxford: Production and tunnelling machines for coal, mineral and ore mining and civil engineering. Dust suppression equipment.

R.D. Cole Chairman

A.D. Johnson Managing Director

The Dosco Corporation† Virginia, USA: Underground roadway roof supports. Sales and service of mining equipment.

R.D. Cole Chairman

I.E. Marianski President

Hollybank Engineering Co Ltd.† Tuxford: Underground roadway roof supports and mining contracting.

R.D. Cole Chairman

K.T. Sisson Managing Director

Hawker Noyes Pty. Ltd. Sydney, Australia: Contract engineering, mining machinery, merchandising of engineering products and non-ferrous metals.

B.S. Price Chairman

K.E. Odbert Managing Director

Other Activities

Canadian Steel Foundries Division† Montreal, Canada: Steel and alloys castings for railway, industrial and nuclear power applications. Specialists in large high-integrity castings.

M.J. Colman Vice-President

Lister Shearing Equipment Ltd. Dursley: Sheep shearing equipment, horse and cattle clippers.

G. Howell Chairman

P.J. Buttery Director and General Manager

Kockums CanCar+ Surrey. Canada: Kockums CanCar Corp.+ Atlanta, Georgia. USA: Sawmill and lumber processing equipment.

K.G. Miles Vice-President

Gardiner, Sons & Co Ltd. Bristol, Cirencester and Shepton Mallet: Home improvements stores. W.J. Richardson *Chairman*

A.G.P. Allen Managing Director

Saro Products Ltd. East Cowes: Extruded thermoplastic sheet and thermoformed packaging items.

W.J. Richardson Chairman

N.R. Finn Managing Director

Bunnings Ltd.§ Australia (24·1%): Sawmilling, timber and hardware merchandising, building contracting.

PRINCIPAL
OPERATING
UNITS, CHIEF
EXECUTIVES AND
MAIN PRODUCTS
CONTINUED

Holding Companies

Crompton Parkinson Ltd. Guiseley
Westinghouse Brake and Signal Holdings Ltd. Chippenham
Hawker Siddeley Canada Inc. ††Toronto, Canada
R.D. Cole Chief Executive Officer

Notes to pages 46-50

- 1 Unless otherwise stated the companies are incorporated in England and Hawker Siddeley Group PLC owns, directly or indirectly, 100% of the issued share capital.
- 2 * Shares held directly by Hawker Siddeley Group PLC.
- Other subsidiaries' shares are held by intermediate holding companies.
- † Divisions or subsidiaries of Hawker Siddeley Canada Inc.
- †† Hawker Siddeley Canada Inc. (59.1% of common shares and 41.8% of preferred shares held).
- 3 § Denotes related company; particulars in respect of share capital shown below.

Related Companies

The following are particulars in respect of the capital of related companies	Amount issued	Proportion held by the Group %
Bunnings Ltd Ordinary stock units	43,540,996 \$Aus	24·1
Crompton Greaves Ltd Equity shares 15% secured redeemable non-convertible debentures	96,000,000 Rupees 200,000,000 Rupees	37·5 —
Delta Crompton Holdings Ltd Ordinary shares	88,063 £	36.0
Kirloskar Electric Co Ltd Equity shares 11% redeemable cumulative (taxable) preference shares	66,998,000 Rupees 2,500,000 Rupees	20.3
Lister Petter Diesels SA Common shares	2,726,050 Pesos	44 ·1
Onan Corporation Common stock	62,000 \$US	36.0
Salister Diesels (Pty) Ltd Ordinary shares	1,428,571 Rand	35.0
Westinghouse Cubic Ltd Ordinary shares	200,000 £	50.0

The Annual General Meeting of Hawker Siddeley Group Public Limited Company will be held at the Inn On The Park, Hamilton Place, Park Lane, London W1, on Wednesday 21st June, 1989 at 12:00 noon, for the following purposes:

- 1 To receive and adopt the Directors' Report and Accounts for the year ended 31st December, 1988. (Resolution 1)
- 2 To declare a final dividend on the ordinary shares. (Resolution 2)
- **3** To re-elect Directors. (Resolutions 3 to 7 inclusive)
- 4 To reappoint Price Waterhouse as Auditors of the Company and to authorise the Directors to fix the remuneration of the Auditors. (Resolutions 8 and 9)
- 5 To transact any other ordinary business of the Company.

By order of the Board

D.R. Gilbert, *Secretary* 18 St. James's Square, London SW1Y 4LJ 18th May, 1989

Notes

- 1 Any member of the Company entitled to attend and vote at this Meeting is also entitled to appoint one or more proxies to attend and vote in his stead: a proxy need not be a member. A form of proxy is enclosed which, to be effective, must be deposited with the Company's Registrar not later than noon on 19th June, 1989.
- 2 Under the Company's Articles of Association only the holders of ordinary shares of the Company are entitled to attend and vote at this Meeting.
- 3 Copies of the Directors' service agreements with the Company and its subsidiaries will be available for inspection during the normal business hours at 18 St. James's Square, London SW1 from the date of this notice until the date of the Annual General Meeting, and on 21st June, 1989 at the place of the Meeting from 11·45 a.m. until the conclusion of the Meeting.

NOTICE OF MEETING

HAWKER SIDDELEY

HAWKER SIDDELEY GROUP PLC
ANNUAL REPORT & ACCOUNTS 1989

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FINANCIAL H. HLIGHTS

	1989	1988
	£m	£m
Turnover	2,146	1,797
Profit before taxation	202.1	183.7
Profit after taxation and minority interests	123-6	110-9
Shareholders' funds	777.7	780-4
Earnings per share	62·5p	56·2p
Dividend per share:		
Interim	10-Ор	8·4p
Final	15·0p	14·1p

Including the imputed tax credit, the equivalent total gross dividend paid or recommended for 1989 is 33·3p (1988: 30·0p)





Sir Lindsay Alexander



David G. Bury



Sir James Hamilton



Christopher Hampson



Quinton Hazell





Timothy W.B. Sallitt



Sir Rowland Wright

Chairman

Sir Peter Baxendell, CBE Appointed to the Board, August 1984; Chairman, May 1986; previously Chairman and Managing Director of Shell Transport and Trading; currently a Director of Shell, also of Inchcape.

Managing Director and Chief Executive

Dr Alan K. Watkins, BSc. PhD, FIM, CEng Appointed to the Board, May 1989; Managing Director and Chief Executive, July 1989.

Sir Lindsay Alexander Non-executive Director. Appointed, April 1981: currently a Director of Lloyds Bank. British Petroleum, and other companies: previously Chairman of Ocean Transport & Trading and Deputy Chairman of Lloyds Bank.

David G. Bury. FCA Finance Director. Appointed to the Board, March 1986.

Sir James Hamilton, KCB. MBE. FEng Non-executive Director. Appointed, October 1983: formerly Permanent Under-Secretary of State at the Department of Education and Science, having previously served as Head of Projects Division at the Royal Aircraft Establishment.

Christopher Hampson (Canada) Non-executive Director. Appointed, February 1989; currently a Director of ICI and Costain Group.

Secretary

David R. Gilbert, TD, MA, LLM

Group Executive

*A.K. Watkins *Chairman* R.P. Hampson *D.G Bury P. Howard D.R. Gilbert D.J. Lewis

H.R. Grant *F.W. Mack (USA)

*Group Director

Registered Office 18 St. James's Square London SW1Y 4LJ Solicitors

Summons & Simmons

Registrar Lloyds Bank Plc Registrar's Department Goring-by-Sea Worthing West Sussex BN12-6DA Quinton Hazell, CBE, DL Non-executive Director. Appointed, February 1979: Chairman of Aerospace Engineering PLC and a Director of a number of other companies.

Frank W. Mack (USA) Appointed to the Board, January 1990.

Timothy W.B. Sallitt, FIIM Appointed to the Board, March 1977.

Sir Rowland Wright, CBE, BSc, CChem, FRSC Non-executive Director. Appointed, February 1979; served successively as the Chairman of ICI and Blue Circle and as Director of a number of other companies.

W.J. Richardson *T.W.B. Sallitt

Auditors to the
Company
Price Waterhouse
Auditors to
subsidiaries
Price Waterhouse
Peat Marwick McLintock



The year's results

1989 has been another year of progress for the Hawker Siddeley Group. Profit before tax increased to £202 million (1988: £184m), profit after tax and minority interests increased to £124 million (1988: £111m) and earnings per share rose by 11% to 62-5p (1988: $56\cdot2p$).

The figures reflect strong underlying progress in the Group's manufacturing businesses, where trading profit improved by 15%. However, the overall results were impaired by the performance of the electrical power contracting business of the Group which lost $\pounds 6$ million compared with a profit of $\pounds 3$ million in 1988.

Dividends

In October 1989, the Directors declared an interim dividend in respect of the year ending

31st December, 1989 of 10p as against 8-4p for the 1988 interim. The Board noted at the time that this contained an element of continuing adjustment of the relationship between interim and final dividends.

The Board is now recommending a final dividend of 15p (1988: 14·1p) giving a total for the year of 25p (1988: 22·5p), an increase for the year of 11%, and bringing the interim to a level of 40% of the total.

The year in perspective

As shareholders are aware, our aims over recent years have been:-

- (a) to identify and build upon growth areas in our engineering businesses, and
- (b) to ensure that our mainstream businesses can compete successfully in their respective markets and provide a satisfactory return on capital employed.

In progressing these aims, 1989 has seen a vigorous programme of acquisitions, further disposal of peripheral businesses, and further increases in capital expenditure aimed at improving productivity.

The 1989 activities are covered in detail in the Review of Operations, but I would like to mention a number of developments which I believe are of major relevance to the Group's future.

Significant successes were achieved by the Group during 1989 in winning major new rail traction contracts from British Rail, Eurotunnel and London Underground; additionally, new orders for the UK signalling business totalling around £100 million were achieved. The electrical businesses have shown strong continued growth, and now account for 65% of the Group's trading profit. The aerospace sector of the Group was strengthened by the acquisition of Standard Aero in Canada. This was a major step in the development of this core business area.

In 1989 the Group earned 60% of its profits from activities based overseas, compared with 50% in 1988. This reflects the moves over the last four years which have been made to reduce the Group's dependence on the UK market. An encouraging feature is that trading profits earned in Continental Europe doubled in 1989 to £12 million.

During the course of the year, the Group made several strategic acquisitions in business segments which offer significant growth opportunity. These acquisitions, which are performing well up to initial expectations, cost a total of £157 million, and have been funded in part by the Group's continuing programme of withdrawal from peripheral activities.

Financial strength

In addition to the expenditure on acquisitions mentioned above, the Group had capital spending, aimed mainly at increasing production efficiencies, of £87 million. Despite this, the Group's financial position remains strong, with gearing representing a modest 10% of shareholders' funds.

We consider that this level of gearing leaves scope for further acquisitions in pursuit of our aims for the future of the Group.

The extraordinary charge of £16.9 million reflects the Group's withdrawal from the mainly defence-related activities of Hawker Siddeley Dynamics Engineering and the general foundry business of Hawker Siddeley Canada.

People and organisation

As I advised shareholders in last year's Annual Report, Dr Alan Watkins succeeded Mr B.R. Bensly as Managing Director and Chief Executive on 1st July, 1989. He has rapidly set his mark upon the Group, and has the confidence of your Board.

Dr Watkins is establishing a more clearly focused divisional structure within the Group. Each division will be led by a member of the Group Executive, and we believe that this structure will promote efficiency in both manufacturing and marketing processes, and considerably improve strategic planning. In future, the financial reporting will follow this divisional concept, and consequently, results will be tabulated for seven separate divisions: Electric Motors, Electric Power, Instruments and Controls, Batteries, Aerospace, Rail and General Engineering. Apart from the organisational advantages, we believe that this will provide shareholders with a better picture of how the Group is performing.

The following Board changes have also taken place:-

- (a) Mr B.M. Bonfield retired from the Group on 30th September, 1989. He had been a Director since 1st October, 1984, and, on behalf of the Board, I thank him for his great contribution to the Group.
- (b) Mr F.W. Mack joined the Board on 1st January, 1990. Mr Mack is an American citizen who has been in charge of our successful Fasco operations since January 1986.

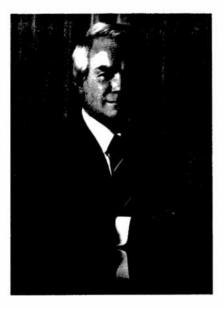
Our ultimate success depends on the performance of each Hawker Siddeley employee, and on behalf of the Directors, I would like to thank everyone for their efforts in 1989.

The future

The Group has opened 1990 with a strong order position. Although some weakness is seen in the businesses serving the UK construction and the US automotive markets, this is more than offset by the orderbooks of companies serving the rail market. This strength, combined with a maintained order position in Aerospace, Batteries, Instruments and Controls and in companies serving the Electricity Supply Industry, gives the Board confidence to expect further growth of profits in 1990.

For the longer term, the Group is undertaking a programme of restructuring and strategic appraisal which will exploit the opportunities which lie ahead.

Sir Peter Baxendell, *Chairman* 28th March, 1990



1989

As mentioned in the Chairman's Statement. 1989 was another successful year for the Group. Although tougher trading conditions developed as the year progressed. Group profit before tax was up 10% to £202 million with earnings per share increasing by 11%.

As illustrated on page 10, progress was made in nearly all of the Group's business sectors, with particularly good performances from Electric Motors and Generators and Mechanical Specialised Equipment. Taken together, the three electrical sectors contributed 65% of the Group trading profit. In 1989 40% of the Group's trading profit arose from the UK and 60% from overseas. A fuller geographical analysis is shown on page 10. Exports from the UK amounted to £285 million

with strong export performance from Diesel Engines and Electric Motors and Generators.

New initiatives

Since I assumed the role of Chief Executive on July 1st, upon the retirement of Bob Bensly, the Group has taken a number of new initiatives. We are planning to build on the underlying strengths of the Group in the face of new challenges presented by the progressive internationalisation of markets. These initiatives have included the introduction of a more focused organisational structure, a drive to ensure that the Group employs the best available manufacturing practices and an increasing emphasis upon the Group's human resources and the training and development of managers.

For many years the Group has achieved progress in its operating performance through organic business growth and selective acquisitions. The Group has operated through a large number of loosely-knit but tightly run units, with a high degree of autonomy but strong financial control. The emergence of world class competitors makes it necessary to obtain every possible benefit or special advantage which can be obtained from grouping units which have an affinity in terms of markets, distribution channels, technology or manufacturing.

In 1990 we are introducing a new divisional structure. Each division will be headed by a Group Executive with the objective of maximising the benefits from grouping within the context of his division. The first task will be to complete a reappraisal of each division's operations, identifying a clear strategy for the future, for submission to the centre and review in an overall Group context. Consequently, 1989 is the last year that we shall be reporting our annual figures under the sector headings which we adopted in 1986. The 1989 trading figures have been restated under the new divisional structure on page 28.

Acquisitions and disposals

During 1989 £157 million was spent on acquiring businesses with operations already familiar to the Group. The largest of these acquisitions were Standard Aero and GEC ALSTHOM Electromotors, now trading as Electromotors. Standard Aero, based in Winnipeg, Canada, considerably strengthens the Group's activity in aeroengine repair and overhaul, whilst Electromotors gives a boost to the Group's electric motor business in the UK.

Efforts to enlarge the Group's foothold in Continental Europe were rewarded with small acquisitions in France, Italy and West Germany.

The progressive withdrawal from peripheral activities continued with the divestment of Gardiner. Sons & Co. and the consumer battery division of Crompton Vidor, both transactions being completed in December. Although Gardiner, the west country retailer, made a reliable profit contribution over the years, it did not fit in with the Group's strategic thrust and it was decided to accept a good offer from the management. The consumer division of Crompton Vidor was sold to Rayovac Corporation of the USA as it was judged that it would prosper better within a larger consumer battery group. At the end of the year, steps were also taken to withdraw from Hawker Siddeley Dynamics Engineering and the Canadian Foundries division of Hawker Siddeley Canada. These latter businesses, which made losses in 1989, are also included under Discontinued Activities.

As a result of the most ambitious acquisition programme in the history of the Group to date, the year ended with net borrowings of £76 million compared with shareholders' funds of £778m. We believe that this modest level of gearing of 10% still leaves scope for further strategic acquisitions as the Group increases its focus on the new divisions.

Best practice

In order to meet international competition in the most efficient manner, steps are being taken throughout the Group to identify and progressively adopt the best manufacturing systems which are appropriate for the scale of our operations. We believe that only by introducing the most cost effective practices will the Group be able to succeed in the increasingly competitive conditions which are likely to prevail in the 1990's and beyond. In 1989 Group companies spent £87 million on capital investment, largely to upgrade the Group's facilities and to improve productivity.

Another initiative relates to training. The process of more formal training, which was started in 1988, is being systematically accelerated to ensure that at every level there is career development and training. We intend to instil throughout the Group a proper understanding of the wider strategic issues and what actions are necessary to apply the best practices and ultimately to serve our international customers most effectively in our chosen product/market sectors.

1990

A highlight of 1989 was the acceleration in orders obtained by the Group's rail operations. These included signalling orders for the Central Line of London Underground and for Thailand, locomotives for Morocco and for the Channel Tunnel shuttle trains and propulsion equipment for the Central Line and for British Rail's Networker fleet. Major orders, other than rail equipment, included Hawker de Havilland's order from Airbus Industrie for producing wing components for the A330/A340 aircraft and Hawker Noyes' order from Newmont Mining for the supply of heavy earthmoving equipment to the New Celebration mine in Western Australia.

Despite some economic uncertainty at the present time, the Group plans to take advantage of its strong orderbooks and to pursue forward looking policies under its new structure. We expect to make further progress in 1990.

The Review of Operations, which starts on page 11, reports on 1989 in greater detail.

Dr. Alan K. Watkins, Managing Director and Chief Executive 28th March, 1990

	Tur	nover	Tra Pro	ding		oital loyed
Analysis by activity	1989 £m	1988 £m	1989 £m	1988 £m	1989 £m	1988 £m
Electric motors and generators	354	279	44.5	30.4	170	115
Electrical distribution and controls	567	410	47.0	52.2	184	172
Electrical specialised equipment	361	327	38.0	32.4	157	132
Diesel engineering	197	191	16.3	14.7	164	119
Mechanical specialised equipment	614	468	53.8	44.0	382	275
Continuing businesses	2,093	1.675	199-6	173.7	1,057	813
Discontinued activities	53	122	(1.2)	9.9	9	30
	2,146	1.797	198-4	183-6	1,066	843

Geographical analysis by area of manufacture

	2,146	1,797	198-4	183.6	1,066	843
Discontinued activities	53	122	(1.2)	9.9	9	30
Continuing businesses	2,093	1.675	199-6	173.7	1,057	813
Other	146	118	21.1	12.3	66	51
Canada	101	84	18-8	14.3	181	117
Australia	369	255	29.4	20.2	153	115
USA	614	420	51.0	47.2	255	199
United Kingdom	863	798	79.3	79.7	402	331

The composition of capital employed is shown on page 50.

REVIEW OF OPERATION

1

ELECTRIC MOTORS AND GENERATORS



ELECTRICAL DISTRIBUTION AND CONTROLS



ELECTRICAL SPECIALISED EQUIPMENT



DIESEL ENGINEERING .



MECHANICAL SPECIALISED EQUIPMENT

ELECTRIC MOTORS AND G RATORS

Small Machines

Brook Crompton

Electromotors

Brook Crompton Betts

Fasco Motors

Eleo Elettromeccanica Fratelli Colombo (related company)

Large Machines

Brook Crompton

Brush Electrical Machines

Crompton Greaves (related company)

Kirloskar Electric Co (related company)

Pictured opposite:

Supervising the scinding machines for electric motor production, at Eleo Elettromeccanica in Milan, Italy.

As anticipated a year ago, 1989 proved to be a successful year for the Group's operations in electric motors. Trading profit increased by 46% to £44.5 million, representing 22% of the Group total. The sector was enlarged by some strategic acquisitions, the largest of these being GEC ALSTHOM Electromotors, now trading as Electromotors, completed in December. 1990 is expected to be another good year for electric motors, with a full year's contribution from acquisitions made in 1989.

Small Machines

The main operating units in the Small Machines segment did well. Fasco's motor division, which specialises in fractional horsepower motors, achieved strong sales and profit growth. Benefit was obtained from a full year's contribution from the companies which were acquired in 1988. Emphasis is being placed on value added product features, and international markets are being successfully developed. Early in 1990, the motor division of Electrohome, with one plant in Canada and two in the USA, was acquired. This move adds small DC motors to the product range as well as providing Fasco with additional AC motor capacity and a good opportunity to become a major player in the Canadian market.

In the UK, the small motor division of Brook Crompton had a good year and strengthened its export sales, particularly to Continental Europe. Further progress was made in North America, with the manufacture of AC motors being commenced in Canada. The fractional horsepower motor division at Doncaster and Brook Crompton Controls at Wakefield also improved their profits. In December, Brook Crompton's motor business was strengthened by the acquisition of Electromotors. This business brought in three plants in the UK as well as additional products, including DC motors.

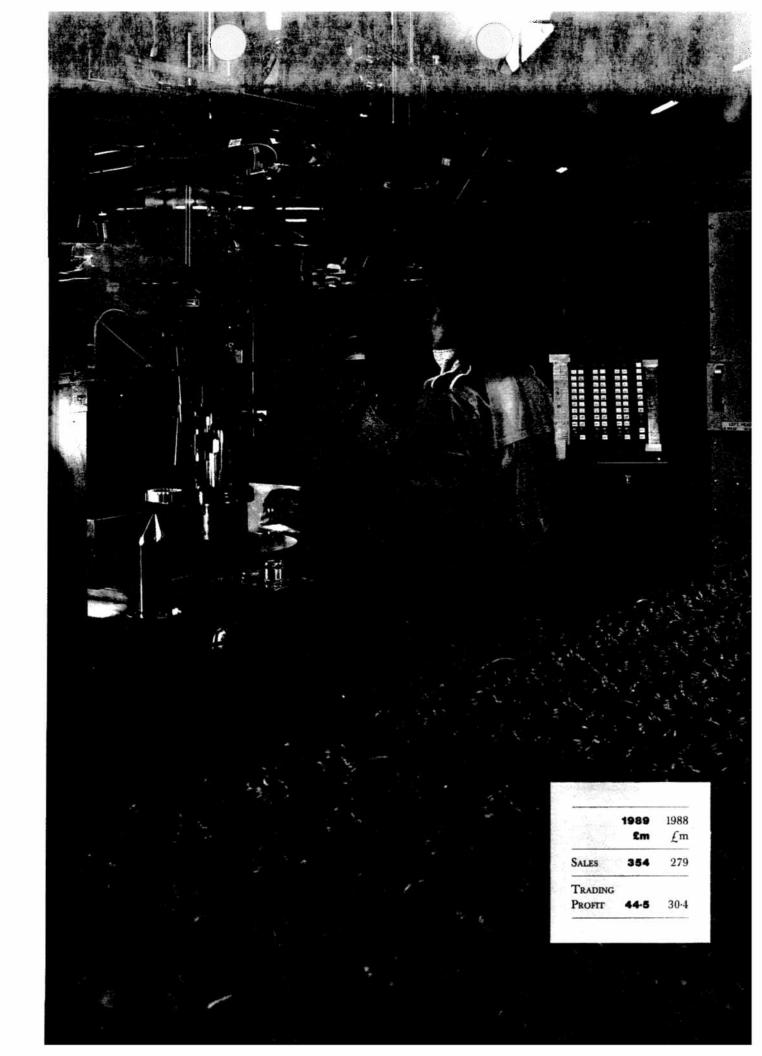
With the object of strengthening the Group's position on the Continent, an initial manufacturing investment in Europe was made in May with the purchase of 49% of Elco Elettromeccanica Fratelli Colombo, of Milan, Italy, specialists in motors for the refrigeration industry. Mutual benefits are beginning to flow from the close relationship with Brook Crompton. In Australia, Brook Crompton's business was merged in May with the Betts Electric Motor division of James N. Kirby to form Brook Crompton Betts. The Group holds 51% of the merged business, which is Australia's leading manufacturer of small motors.

Large Machines

All the companies in the Large Machines segment increased their profits. The industrial division of Brush Electrical Machines, of which the principal product-line is turbo generators, continued to take advantage of the high level of activity in combined cycle power stations. Manufacturing resources are being enhanced to meet the strong order inflow. The industrial controls division maintained growth in each of its product-lines and the management is optimistic of the export potential for its automotive test systems.

The large industrial motors division of Brook Crompton at Guiseley continued to expand, with the help of some redesigned products and sophisticated application engineering to meet customer needs.

Both of the Indian companies did well. Crompton Greaves (37-5% owned) and Kirloskar Electric Company (20-3% owned) produce a wide range of electrical equipment as well as motors, and they experienced a strong demand in both domestic and export markets.



Engineering Contracting

Hawker Subleley Power Engineering

Switchgear

Hawker Fusegear

Brush Fuses

Brush Switchgear

South Wales Switchgear

Transformers

Brush Transformers

Augier

South Wales Transformers

Hawker Siddeley Power Transformers

Pictured opposite:

Brush Transformers supply 1000 KVA and 1250 KVA distribution transformers for rock rushers and conveyor drives at Cliffe Hill Quarry in Lewestershire, England. The growth expected in 1989 in the Electrical Distribution and Controls sector was not fully realised, partly because of a severe downturn at Hawker Siddeley Power Engineering, although the Transformer segment performed well. The trading profit at £47-0 million was 10% lower than in 1988 and represented 24% of the Group total. A better overall trading performance from this sector is expected in 1990.

Engineering Contracting

The main objective of Hawker Siddeley Power Engineering is to obtain turnkey projects which use equipment supplied by other Group companies. Although an overall loss was incurred in 1989, the company has been active in the market for cogeneration power stations in the USA. The UK company was also active in other parts of the world to provide power generation and distribution facilities in less developed countries. The UK market for turnkey projects was dull but is expected to pick up with the development of private power generation projects, using the experience obtained in the USA.

Switchgear

Brush Switchgear and South Wales Switchgear continued to take advantage of the high level of activity in home and export markets. Strenuous efforts are being made for the further development of overseas markets, helped by productivity improvements and product development programmes. Towards the end of the year, Brush Switchgear benefited from commencement of deliveries arising from major Ministry of Defence orders placed in previous years. The small switchgear units in Africa and Australia made a higher profit contribution.

The fusegear companies made good progress in rationalising production and marketing. In the UK. Brush Fusegear and Dorman Fusegear were merged into Hawker Fusegear. Research and development efforts resulted in new fuselinks for the protection of semiconductors and new industrial products, both of which offer growth opportunities. The overall fusegear profits were lower because of weaker demand from automotive and construction customers in the USA.

Transformers

1989 was a year of strong home demand, particularly from the Area Electricity Boards, and significant successes were achieved in export markets. All the Transformer companies increased their profits. At Loughborough, Brush Transformers continued with its investment programme to complement the drive for cost reduction and product development. Technical achievements included the supply of a complex power transformer for a Californian oil refinery and the seismic qualification of transformers for Sizewell B power station. At Treforest, South Wales Transformers achieved export successes in Brunei, Ghana, Kenya and Kuwait. To improve efficiency, a new pole mounted transformer facility was set up. To establish a presence in the French market, Augier, a small transformer manufacturer near Nice, was acquired in July. The company's products, which include airport and public lighting transformers, are complementary with the Group's existing range.

Hawker Siddeley Power Transformers, at Walthamstow, had a good year and opened 1990 with a strong orderbook. The tapchanger division expanded its product range.

Both of the African units, which manufacture transformers for their own domestic markets, performed well.



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	1989 £m	1988 £m
SALES	567	410
TRADING		
PROFIT	47.0	52.2

Instruments and Controls

Hawker Instrumentation Supplies

Huwker Instruments

Drauetz Technologies

Daytronic Corporation

Fasco Sensors und Controls

Westinghouse Systems

Cables

Deltu Crompton Cables (related company)

Pictured opposite:

Inspection of silicon authors at SenSym's production facility for high technology pressure sensors in California, USA.

Instruments and Controls

The Group continued to develop in Instruments and Controls with six small acquisitions during the year, but overall trading was mixed. The sensors and controls division of Fasco Industries had a flat year. However Elmwood Sensors, its largest constituent business, with operations in the USA and UK, did well and made two US acquisitions. Ocean State Thermotics in June and the Transflex division of Sierracin Corporation in August. These producers of flexible heaters and circuits provide Elmwood with a natural extension of its core thermostat business. Fasco Coutrols, which supplies switching and control devices to the US automotive industry, was affected by the second half downturn in vehicle production. Aerospace Avionics produced lower profits, but made good progress with cost reduction and with some new developments in proximity sensing, fuel management and night vision display. Clarostat Mfg. Co. successfully added new $encoder\ products\ to\ its\ established\ range\ of\ potentiometers.\ Electro\ Corporation, based\ in\ Florida,$ pursued its objective to play a key role in the growing market for sensor technology. The product range was strengthened by the acquisition of OptoSwitch in January. SenSym in March and LazerData in October. These businesses, in Texas, California and Florida, added optical position sensors, solid state pressure sensors and omni-directional bar code scanners to the range. During the year, a low cost production facility was established at Juarez in Mexico. Since the year-end, Fasco has acquired Clairex Corporation to add further products to the OptoSwitch range and the Variable Resistor product line of Allen-Bradley to strengthen Clarostat's US market position in industrial potentiometers.

Hawker Instruments, which was formed in January 1989 to combine the manufacturing businesses of Crompton Instruments, Crompton Modutec, Crompton Instruments (South East Asia) and A & M Instrument, is based in New Hampshire. Markets were under competitive pressure, but the progressive integration of resources will help to improve profitability. An aggressive programme of product development is being pursued. The small Japanese operation trading as Crompton Alps, had a promising first year and is being extended. Hawker Instrumentation Supplies, the distribution and service business in North America. Europe and Australasia, operated in difficult markets, particularly in the USA. In its first full year in the Group. Dranetz Technologies, of New Jersey, made good progress with an essentially new management. Efforts were devoted to improving manufacturing technology, strengthening the marketing function and developing new products. Daytronic Corporation, of Ohio, successfully launched several new instruments with enhanced capabilities and achieved profit growth as well as a significant increase in orders.

Westinghouse Systems had its best-ever year, with increased orders for energy management systems for the electricity and pipeline industries, notably from electricity authorities in Malaysia and Spain. Further success was achieved with the company's automatic vehicle identification equipment and pneumatic conveying devices. Research and development activity was stepped up in order to maintain the company's position in the systems market.

Cables

Following the merger in January 1989 between Crompton Parkinson Cables and Delta's European cable operations, the Group's interest in cables is confined to a 36% shareholding in Delta Crompton Cables. The new company had a disappointing year, but the benefits from consolidating the business into fewer manufacturing units should start to be realised in 1990.



Batteries

Oldham Crompton Batteries

K W Battery Company

Oldham France

Tungstone Batteries

Hawker Energy Products

Crompton Eternacell

Power Conversion

The strengthening orderbooks for railway equipment began to make a contribution to higher profits in the Electrical Specialised Equipment sector. Trading profit in 1989 increased by 17% to £38.0m, 19% of the Group total. 1990 opened with a significantly higher orderbook for the Rail Equipment segment and this, together with some reorganisation in Batteries, should underpin continued profit growth from this sector.

Batteries

Profits improved slightly in 1989. In rechargeable batteries, where the Group specialises largely in industrial batteries, but also produces automotive and aircraft batteries in the UK, it was a year of preparing for future growth. The UK operations were reorganised by concentrating the production of traction batteries at Oldham and automotive batteries, mainly for the replacement market, alongside the standby batteries at Market Harborough. Hawker Energy Products, formerly Tungstone Energy Products, the aircraft battery manufacturer acquired in 1988, was transferred to Newport and rapidly established itself as a supplier to the Ministry of Defence and the US military as well as to civil aviation customers worldwide.

Oldham France achieved a record profit despite a fire at its Arras factory in August. Production of lead-acid batteries commenced in July at a new plant in South Korea, operated as a joint venture between Oldham France and Nambang Corporation, thus opening up the Far Eastern markets. The gas detection division of Oldham France was extended into Germany by the purchase of 47% of Winter Gas Warnanlagen in February. The shareholding has since been raised to 75%. Penetration of European markets was pursued and Tungstone Batteries' German subsidiary obtained product approval for the supply of batteries to the West German Bundespost. In the USA, KW Battery Company continued to improve its profits and market share in motive power batteries. This was further enhanced by the purchase of Richco Batteries in March 1990.

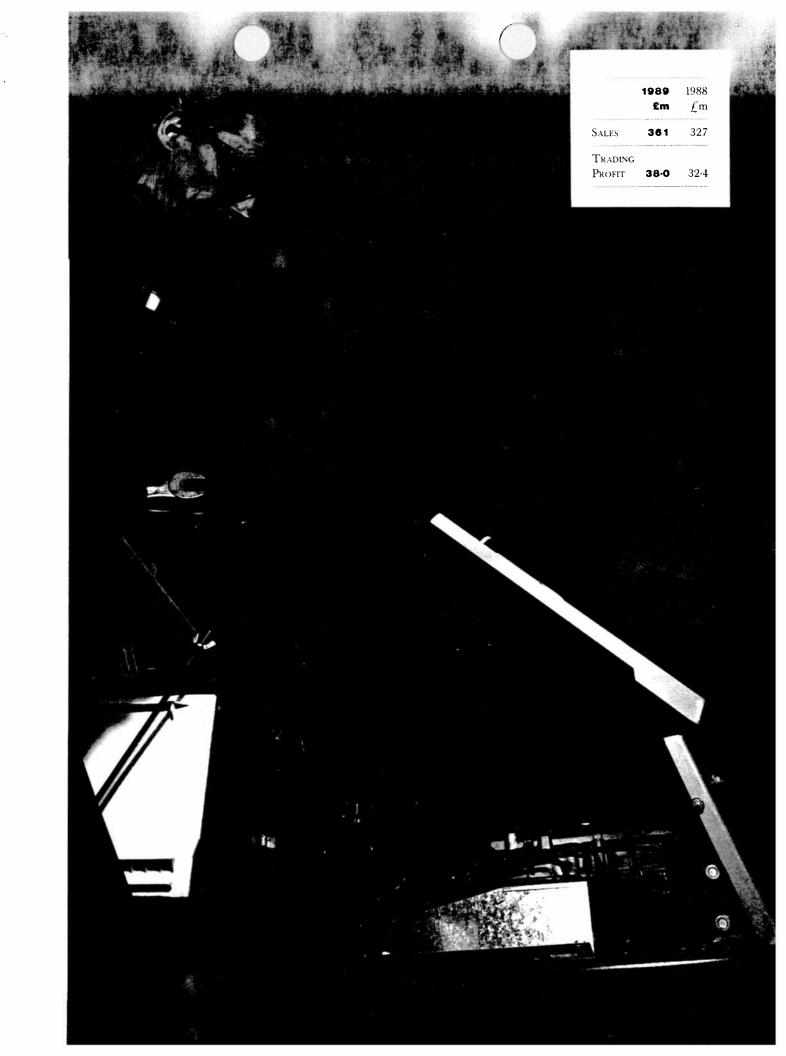
Following the sale of the consumer division of Crompton Vidor in December, the Group's primary battery operations are now confined to lithium battery manufacture through Power Conversion in the USA and Puerto Rico and Crompton Eternacell at South Shields. Crompton Eternacell continued to expand, winning major defence export business as well as orders from the UK Ministry of Defence. For Power Conversion it was a year of recovery. A major order was obtained from the US Army and new export markets were opened up. The production capability in Puerto Rico was expanded to cover lithium sulphur dioxide batteries for defence applications and new lithium cells were developed for the industrial memory backup market.

Rail Equipment

After a quiet period for signalling projects, there was a strong upturn in orders for the Group's UK, Spanish and Australian companies. In the UK, Westinghouse Signals obtained a major contract to resignal the Central Line of London Underground and further orders from British Rail. using the most modern form of solid state interlocking. In Spain, Dimetronic had a good year and received substantial orders from Spanish Railways and from the Madrid Metro. Development of a new generation of automatic train operation equipment was completed and is being evaluated by several mass transit authorities in Spain. Dimetronic further penetrated the bus control market

Pictured opposite:

Tungstone Batteries supply Oldham brand starter batteries for fork-lift trucks in Wolverhampton, England.



Rall Equipment

Brush Electrical Machines

Westinghouse Brake & Signal

Dimetronic

Westinghouse Brake & Signal Co (Australia)

Safetran Systems Corporation

Hawker Siddeley Rail Projects

Lighting and Other

Crompton Lighting

Westcode Semiconductors

Crompton Stud Welding

Pictured opposite:

A Class 60 heavy freight haulage locomotive at Brush Electrical Machines, Loughborough, England. 100 of these locomotives are being built by Brush under a major contract for British Rail.

with orders for automatic vehicle monitoring systems in Majorca and Vizcaya.

The signal division of Westinghouse Brake & Signal Company (Australia) saw an improvement in domestic demand, and its marketing efforts in Asia were rewarded with a major contract in Thailand. Ness Security Products had a successful year, and Malloch Digital Design was acquired in August to strengthen its position in the high security segment of the security control panel market. In the USA, Safetran Systems Corporation, a major supplier to the North American railway signalling market, improved its profit. An increase in market share was achieved by introducing the latest grade crossing equipment, generated by the company's development programme. Collaboration in research and development between all the signalling companies began to show results.

Westinghouse Cubic, jointly owned with Cubic Corporation of the USA, successfully completed the London Underground ticketing system project. Marketing efforts came to fruition with orders for automatic fare collection equipment from the Docklands Light Railway and Strathclyde, further business from the Electricity and Gas boards and initial orders from Local Authorities for community charge machines.

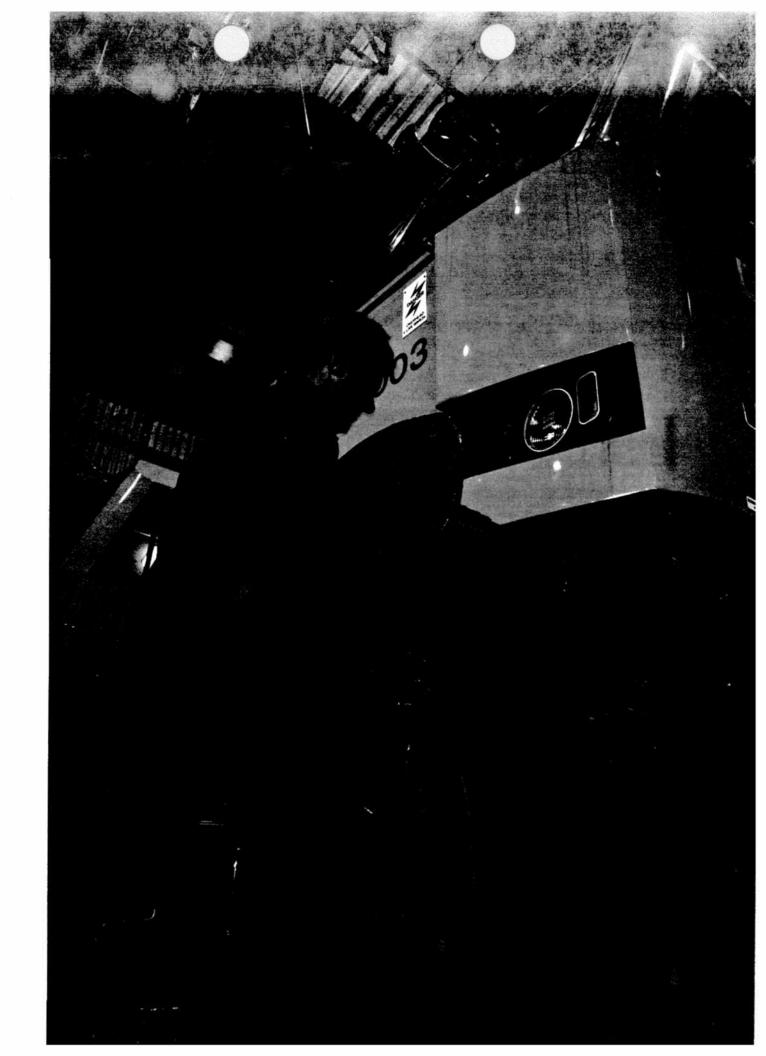
The welcome improvement in the orderbook produced a better performance by the traction division of Brush Electrical Machines. Deliveries of the Class 60 freight locomotives to British Rail gained momentum during the second half-year. An increase in capacity is planned for 1990 to meet the growing volume of home and export business. This includes locomotives for the Channel Tunnel shuttle trains and Morocco and propulsion equipment for new rolling stock on the Central Line of London Underground, for British Rail's new electric multiple units for Network Southeast and for the extensions to the Docklands Light Railway.

Lighting and Other Activities

Recovering from a warehouse fire in 1988, Crompton Lighting reoccupied its main building in August and continued to achieve sales and profit growth. The product range was further strengthened by the Flair range of display luminaires and new ranges of robust bulkhead luminaires. The transfer of the Northampton assembly plant to Doncaster and restructuring of the marketing and distribution organisation are planned to yield continuing growth.

Westcode Semiconductors benefited from the major investment during 1988 in a new factory and plant for the manufacture of high performance power semiconductor devices. Growth in international markets was sustained and the company entered 1990 with a substantial orderbook.

By continuing to focus on special market niches for fasteners in the automotive and electrical industries. Crompton Stud Welding had another record year. The company has embarked on a programme to develop new products both for existing markets and for new applications in the construction and aerospace industries.



DIESEL ENGINEERING

Small Engines

Lister-Petter

Hawker Siddeley Pawer Plant

Onan Corporation (related company)

Large Engines

Mirrlees Blackstone

The brighter prospects and stronger orderbooks which prevailed at the beginning of 1989 for the Group's Diesel Engineering units yielded only a small improvement in profit for the year as a whole. Trading deteriorated as the year progressed and, although first half profit was 31% higher than in 1988, the trading profit from the Diesel Engineering sector for the full year increased by only 11% to £16·3 million, 1990 is expected to be another challenging year for diesel engines, but the large engine units should benefit from a strong opening order position.

Small Engines

Lister-Petter, which produces diesel engines mainly up to 50hp, started 1989 with a steadily improving trading performance. However, progressive softening of demand, particularly from the UK construction equipment industry, affected the profit improvement for the full year. Operating costs were reduced by concentrating production at Dursley and Swindon, following the closure and subsequent sale of the Staines factory. The Alpha range of air and water cooled engines was extended and is making sound progress in domestic and overseas markets.

Although international demand for small generating sets was affected by a shortage of hard currency. Hawker Siddeley Power Plant had a better year. The marine market responded well to the new Lister-Petter Alpha engine range, and the company expects to benefit as the availability of these engines improves.

Onan Corporation, the US-based generating set manufacturer, which is jointly owned with Cummins Engine Company, the Group having a 36% shareholding, had a static year, although Newage Engineers, the UK subsidiary, which produces alternators, and theinternational industrial generating set division continued to grow. In the important motor home and pleasure marine generating set market Onan retained its market share, but demand weakened as the year progressed. A new small high speed set for recreational vehicles was introduced. To improve its competitiveness in the US market for industrial sets, Onan launched new cost-reduced, but standard feature, sets for Cummins/Onan distributors.

Large Engines

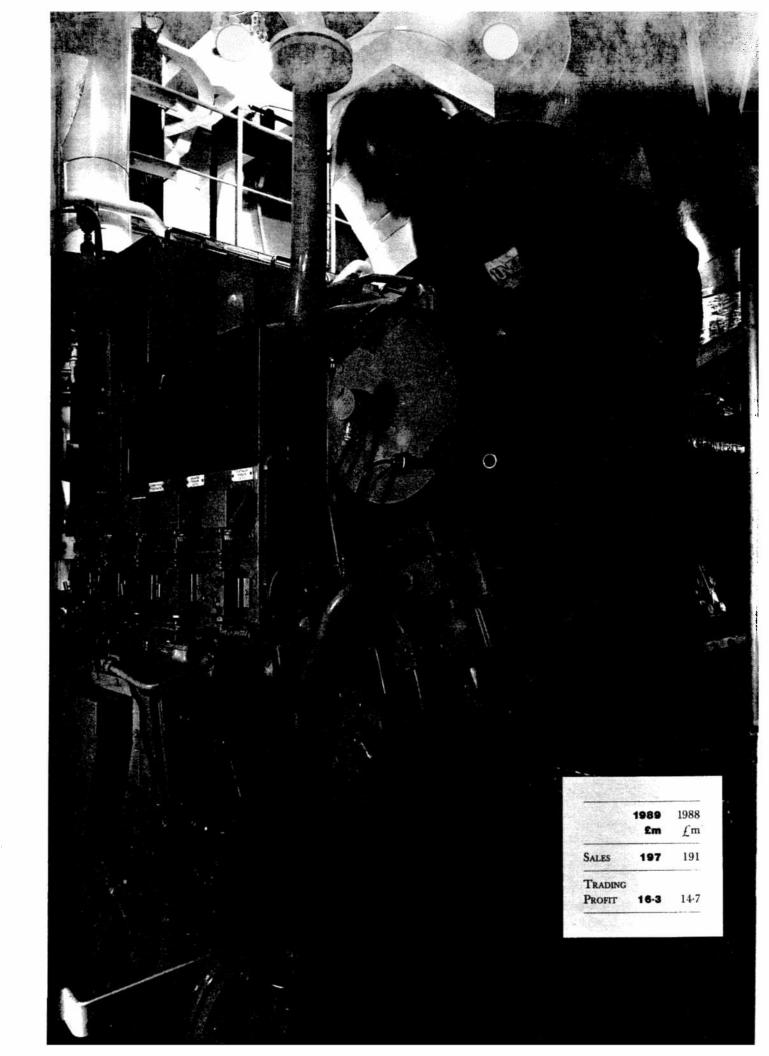
The strong order intake in 1988 at Mirrlees Blackstone (Stockport) continued into 1989 with a major order for large generating sets for China. As a result, there was a progressive increase in factory output through the year. By the year-end 25% of the MB275 engines for the British Rail Class 60 freight locomotives, which are being built by Brush, had been completed.

At Mirrlees Blackstone (Stamford), the factory operated below capacity throughout 1989, but the company achieved some improvement in orders towards the end of the year. Performance upgrading of the high-powered EV engine continued and it is anticipated that this product will form an increasing proportion of the output in future.

The marketing and support companies in Canada, Australia, Singapore and the USA again made useful profits. However, the overall profit contribution from large diesel engines was lower. The management of the large engine units has been reconstituted: the formation of a single board to manage both UK factories is expected to be more effective.

Pictured opposite:

Mirrlees Blackstone 6 cylinder MB275 diesel engines form the main propulsion units for the 'City of London' dredger.



Rail Equipment

Westinghnuse Brake & Signal

Westinghouse Brake & Signal Co (Australia)

Canadian Steel Wheel

CGTX

Aerospace

Equipment

Hawker de Havilland

Hawker Pacific

Standard Aero

HDA Forgings

Insumat

Orenda

Pictured opposite:

Standard Aero provides overhaul services for a range of aeroengines, including this Allison T56 engine at their site in Winnipeg, Canada.

As predicted a year ago. Mechanical Specialised Equipment produced better trading figures. Trading profit from this sector increased by 22% to £53-8 million. With a full year's contribution from the new subsidiary, Standard Aero, 1990 is expected to yield a further trading improvement.

Rail Equipment

Once again the largest profit contribution to Rail Equipment came from CGTX, the rail car leasing business, which is 55% owned by Hawker Siddeley Canada. Benefit was obtained from additions to the fleet during 1988 and an improved level of customer utilisation produced a marked increase in sales and profit. Reduced demand and highly competitive pricing resulted in lower forged railway wheel production at the Canadian Steel Wheel division, but, to offset lower rail business, greater emphasis was placed on industrial circular products, such as crane wheels and gear blanks.

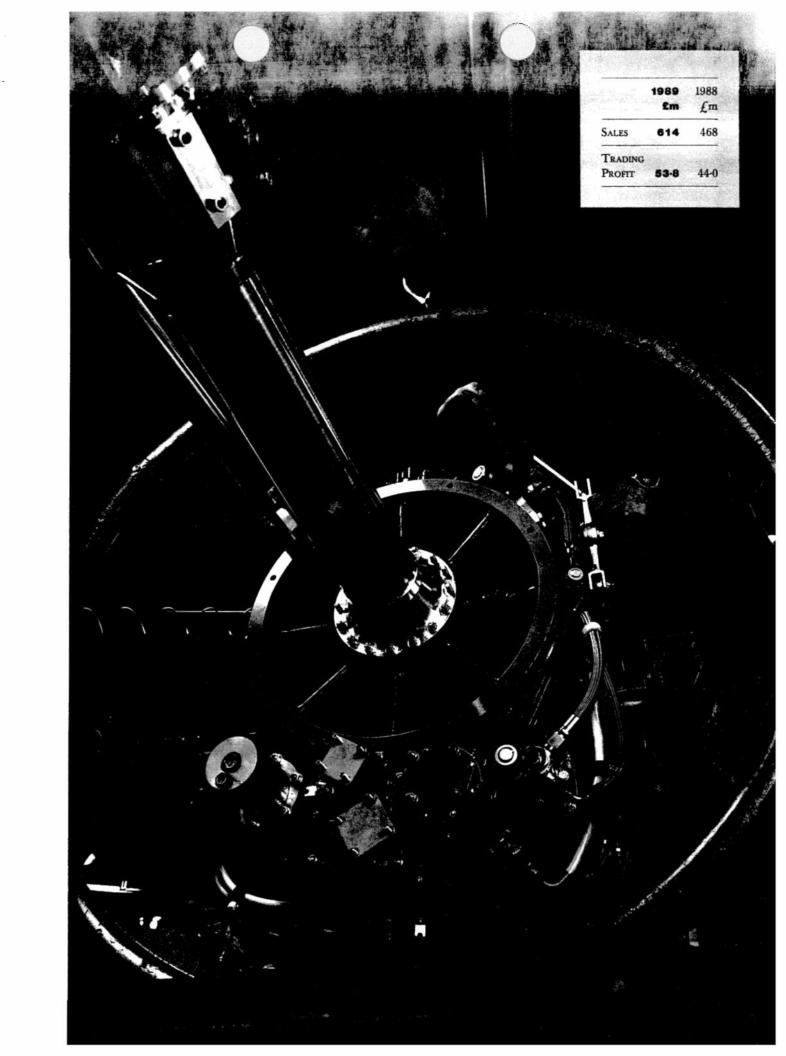
In the UK, Westinghouse Brakes suffered from delays in rolling stock investment programmes by British Rail and London Underground, but secured a strong order inflow late in the year. As a result of product development, growth is planned to come not only from brakes and doors, but also from communications, air conditioning, heating and ventilation equipment.

In Australia, the tight market conditions for railway brakes continued for much of the year, but long-term business helped to maintain profitability. The road brake and hydraulic hoist business, Roc Fluid Power concentrated on fewer products, with consequent improvement in market share and profitability. In the face of weak demand, McKenzie and Holland, the small New Zealand company, was sold in July to a partnership formed by employees.

Aerospace Equipment

Aerospace manufacturing and aviation support are expected to make a growing contribution to the Group in the years to come, and two significant moves were made during 1989. Australian-based Hawker de Havilland (70% owned) entered into a collaborative arrangement with McDonnell Douglas Helicopters, of the USA, to design and build the fuselage for a new eight-seater helicopter, designated MD900, using the no-tail-rotor concept. Initial customer deliveries are scheduled for 1993 and, to date, the market response has been encouraging. In October, the Group's aviation support operations were augmented by the purchase of Canada-based Standard Aero, a major operator in the North American market for aeroengine repair and overhaul, with its main facilities in Winnipeg handling a wide range of small engines.

Hawker de Havilland had another record year, largely as a result of buoyant sales of civil airliners in the USA and Europe, for which the company produces a variety of airframe fabrications. Negotiations for the supply of wing components for Airbus A330/A340 aircraft were also successful. Production of PC9 training aircraft and Black Hawk helicopters for the Australian Defence Forces continued on schedule, and assembly commenced in Melbourne of General Electric T700 aeroengines, also to meet local demand. Australian Aviation College, purchased at the end of 1988, obtained a three-year contract to train pilots for QANTAS. The aviation support activities of Hawker Pacific in Australasia and the USA produced lower profits. as trading was affected by more difficult market conditions and events outside the company's control in China and the Philippines. However, sales to Korea and Thailand improved and the hydraulic overhaul operation in the USA grew strongly.



Mining Equipment

Dosco Overseas Engineering

Hollybank Engineering

Hawker Noves

Other Activities

Lister Shearing Equipment

Kockums CanCar

Saro Products

Bunnings (related company)

Pictured opposite:

Engineers at Hawker de Havilland in Sydney, Australia are using the latest CADCAM technology for the design and development of the new McDonnell Douglas MD900 helicopter. In the UK, lower demand at the start of the year for forgings for the aerospace and other high technology industries gave HDA Forgings a difficult year. However, the orderbook, particularly for blade forgings, strengthened during the year and the company received its first orders from the Japanese aerospace industry. An improved orderbook enabled Insumat to make a strong profit recovery from supplying insulation products and special fabrications for the aerospace market. Further growth is expected to flow from improvements in technology to meet the challenges of a buoyant market.

In Canada, the prolonged strike, which was not resolved until July, affected the profitability of Orenda. With improved job flexibility and working practices arising from the settlement, emphasis for the rest of the year was placed on rebuilding the confidence of commercial and defence customers. The better yields now being achieved should lead to a full profit recovery in 1990. In January 1990, the business was augmented by the acquisition of Middleton Aerospace in north-east USA and Windsor Aerospace in Ontario. These manufacturers of high tolerance rotating parts for aeroengines complement Orenda's expertise in more complex fabrications.

Mining Equipment

All the Mining Equipment companies increased their profits despite competitive trading conditions. The Hawker Siddeley Canada subsidiaries. Dosco and Hollybank based in the UK. held their positions as key suppliers of tunnelling equipment and roof supports to British Coal. An increased number of tunnelling machines was supplied under the new contract hire scheme. To diversify the product line, Dosco concluded agreements for the manufacture of additional types of tunnelling machine and pipe conveyor systems under licence. In the USA, Dosco Corporation met increased demand for roof supports and achieved a handsome profit improvement.

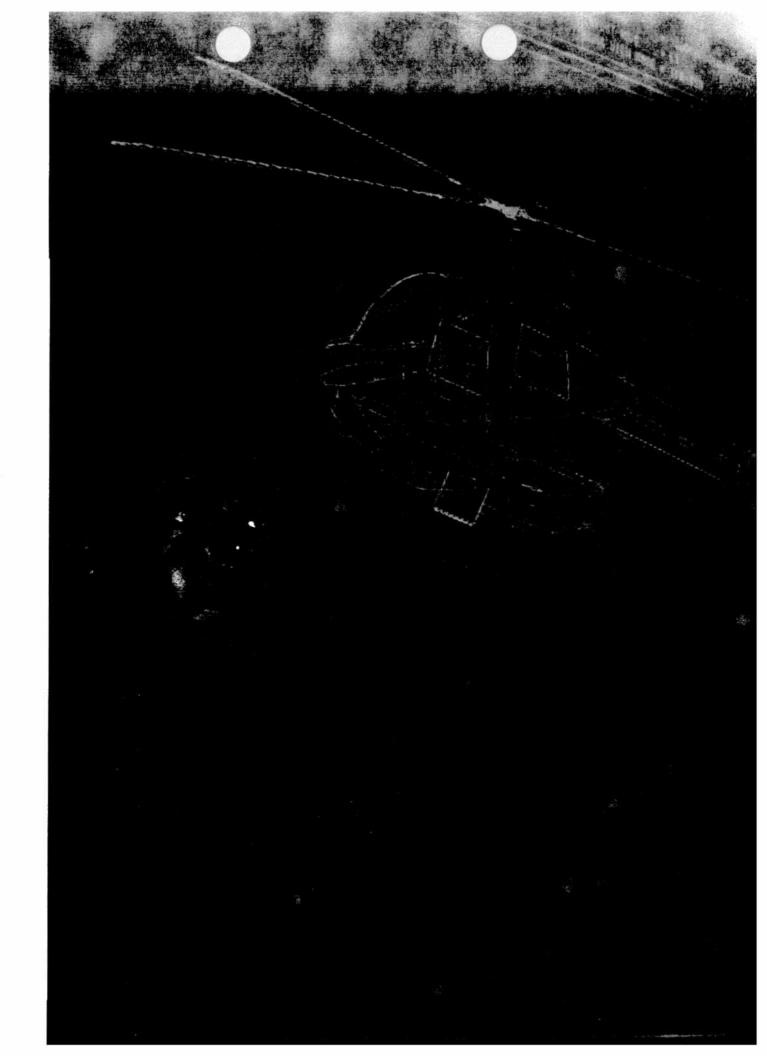
Continued Australian demand from both opencast and underground mining operations enabled Hawker Noyes to have another successful year. Benefit was gained from the acquisition, in July, of Morgan Equipment (Australia), the leading Australian distributor of large excavators and dump trucks to the revitalised coal industry. This business complements the successful Komatsu earth-moving equipment product line. Hawker Noyes became a major supplier to the Australian plastics industry upon the acquisition, in August, of Maplas Equipment & Services, an importer and distributor of moulding, extrusion and thermoforming machinery.

Other Activities

Other Activities now embrace a diminishing range of units in Australia, Canada, USA and UK. The main profit contributor was Bunnings (24.2% owned), the forest products and retail operation based in Australia. After a sizeable improvement in 1988, Bunnings again increased its profit.

The forestry equipment operations in Canada and the USA, trading as Kockums CanCar, achieved record sales of lumber processing machinery, but profit was affected by cost overruns on new machines, which represent an advance in sawmilling technology. Overseas, orders were secured in Czechoslovakia and Sweden and a small sales unit was acquired in Australia.

Lister Shearing Equipment, based in the UK but selling worldwide wherever wool is produced, pursued its product enhancement programme and improved its sales and profit.



DIVISIONAL STRUCTURE

In his Review of 1989 the Chief Executive discussed the new divisional structure to be introduced in 1990 which is illustrated in detail opposite. For consistency purposes the sector information contained throughout this Report relates to the Group structure in force in 1989 and earlier years. It is intended that sector information provided in the 1990 Report will reflect the new structure and to assist in adjusting to the change, the 1989 and comparative 1988 results are restated in the table below.

	Turn	over	Trad Prof	0	Cap: Emplo	
	1989 £m	1988 £m	1989 £m	1988 £m	1989 [†] £m	1988 £m
Analysis by division						
Electric Motors	264	200	34-1	22.3	127	85
Electric Power	448	324	22.2	25.9	140	88
Instruments & Controls	265	226	29.5	29.8	123	113
Batteries	166	145	14.6	11.9	72	63
Aerospace	262	204	18.4	15.8	137	77
Rail	179	173	19:2	15.7	76	65
General Engineering	509	403	61.6	52.3	382	322
Continuing Businesses	2,093	1,675	199-6	173.7	1,057	813
Discontinued Activities	53	122	(1·2)	9.9	9	30
	2,146	1,797	198-4	183.6	1,066	843

Managing Director & Chief Executive	A. K. Watkins	
Group Finance Director	D. G. Bury	
Company Secretary	D. R. Gilbert	
Director - Strategic Planning	D. J. Lewis	
Electric Motor Division	P. Howard	Brook Crompton Brook Crompton Betts Electromotors Fasco Motors
Electric Power Division	R. P. Hampson	Brush Electrical Machines - Industria Brush Switchgear Brush Transformers Hawker Siddeley Electric Africa Hawker Siddeley Power Engineering Hawker Siddeley Power Transformer Mirrlees Blackstone South Wales Switchgear
Instruments and Controls Division	F. W. Mack	Daytronic Corporation Dranetz Technologies Fasco Sensors & Controls Hawker Fusegear Hawker Measurement & Control Westcode Semiconductors Westinghouse Systems
Batteries Division	W. J. Richardson	Crompton Eternacell Hawker Batteries Power Conversion
Aerospace Division	T. W. B. Sallitt	Hawker de Havilland Hawker Pacific HDA Forgings Insumat Standard Aero
Rail Division	H. R. Grant	Brush Electrical Machines - Traction Dimetronic Safetran Systems Corporation Westinghouse Brake & Signals Co (Australia) Westinghouse Brake & Signal
General Engineering Division		Crompton Lighting Fasco Consumer Products Lister-Petter Hawker Siddeley Power Plant Hawker Noyes Hawker Siddeley Canada

The Directors submit their annual report and the audited accounts for the year ended 31st December. 1989 which will be laid before the shareholders at the Annual General Meeting to be held on 11th May. 1990.

Group results and dividends

The accounts of the Group appear on pages 34 to 49. The turnover and trading profit of each of the major business segments in which the Hawker Siddeley Group operates are set out in the Financial tables on page 10.

The dividends already	paid or	recommended	are as	follows:
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, 1	1989	1988
	£m	£m
On 51 2% cumulative preference shares	0-2	0.2
On ordinary shares: Interim of 10·0p per share paid on 29th December, 1989 (1988: 8·4p)	19-7	16.6
Recommended final of 15:0p per share to be paid on		
2nd July, 1990 (1988: 14·1p)	29.7	27-8
	49-6	44.6

Principal activities and business review

A review of operations during 1989 and of the future development of the Group, including details of significant changes in activities, is contained in the Chairman's statement on pages 6 and 7, in the Chief Executive's review on pages 8 and 9 and in the Review of operations on pages 11 to 27.

Directors

The Directors of the Company are shown on pages 4 and 5 and the interests of Directors in office on 31st December. 1989 are given on page 48. There were two appointments to the Board in 1989 – Mr C. Hampson with effect from 1st February and Dr A.K. Watkins with effect from 1st May. Mr B.R. Bensly and Mr B.M. Bonfield reached their normal retirement ages and retired from executive office and from the Board with effect from 30th June and 30th September respectively. Dr Watkins succeeded Mr Bensly as Managing Director and Chief Executive with effect from 1st July.

Since the end of the year, Mr F.W. Mack, has been appointed to the Board with effect from 1st January. 1990 and, having previously attained normal retirement age, Mr R.A. Willford will retire as a Director on 31st March, 1990. In accordance with the Articles of Association. Mr Mack will retire from office at the Annual General Meeting and, being eligible, will offer himself for re-election.

Sir Lindsay Alexander, Sir James Hamilton and Sir Rowland Wright will retire by rotation at the Annual General Meeting; being eligible, they will offer themselves for re-election, special notice having been received pursuant to Sections 293(5) and 379 of the Companies Act, 1985 of the intention to propose a resolution for the re-election of Sir Rowland Wright.

The unexpired period of the service contract of Mr F.W. Mack with a subsidiary of the Company is 2 years 5 months. Sir Lindsay Alexander, Sir James Hamilton and Sir Rowland Wright do not have service contracts.

The Board knows of no contract of significance in relation to the business of the Company and its subsidiaries in which any Director has a material interest.

Charitable and political contributions

Contributions to charities in the United Kingdom made during the year by the Group amounted to £148,200 (1988: £148,600). In 1989, the Group contributed £7,600 (1988: £7,000) to the Economic League, which might be held to fall within the definition of political contributions for the purpose of Section 235(3) of the Companies Act 1985.

Research and development

There is a continuing programme of research and development aimed at the improvement of existing products, introduction of new ones and better production methods in the Group's factories; further information is provided in the Review of operations.

Auditors

The Auditors. Price Waterhouse, have indicated their willingness to continue in office and a resolution for their reappointment will be submitted to the Annual General Meeting.

Share option schemes

Your Directors propose, subject to shareholders' approval, to make various amendments to the rules of each of the Company's three share option schemes. A separate circular explaining and summarising these amendments accompanies the notice of the forthcoming Annual General Meeting at which ordinary resolutions to approve them will be proposed.

Employment policies

The policy and practice of each subsidiary company covering the arrangements for communication and consultation with employees and for the employment of the disabled has been developed in response to the particular situation pertaining at each site. Each subsidiary company in the UK with more than 250 employees sets out the relevant details in its Directors' Report which is filed with the Registrar of Companies. Details from the Report filed by any subsidiary company may be obtained on application to the Group Secretary.

The Code of Conduct for Companies with interests in South Africa issued (in revised form) by H.M. Government in July. 1986 calls for an annual statement as at 30th June each year. A copy of this document is forwarded to the Department of Trade and Industry and a copy of the latest statement is available on request from the Secretary. Hawker Siddeley Group PLC.

Significant changes in Group structure Electric Motors and Generators

Brook Crompton

On 8th December. 1989, the Group purchased the business of GEC ALSTHOM Electromotors for approximately £35m in cash. The business which manufactures on three sites in the UK has enhanced Brook Crompton's competitive position in the small industrial and fractional motors markets in the UK and elsewhere in Europe. The position has been strengthened further with the announcement in February, 1990 of the agreement to purchase Bull Electric Limited of Ipswich, a specialist manufacturer of DC motors mainly for lift and elevator systems.

Brook Crompton Betts Pty Ltd

On 1st May, 1989, Brook Crompton Parkinson Pty merged its electric motor activities with those of James N Kirby Pty to form a new company, Brook Crompton Betts Pty Ltd. The Group has a 51% shareholding in the new company, which is now Australia's largest electric motor manufacturer.

ELCO ELETTROMECCANICA FRATELLI COLOMBO S.P.A.

On 12th May, 1989, the Group purchased a 49% shareholding in Elco Elettromeccanica Fratelli Colombo S.p.A. a privately owned Italian based group. The company is a volume manufacturer of small electric motors and a leading supplier to specialist equipment manufacturers in Europe.

Егесткономе

On 7th February, 1990, the Group purchased the electric motor division of Electrohome Limited for C\$14-8m in cash. Electrohome's small electric motor product ranges, which are manufactured in Canada and the USA, will be integrated with those of Fasco Industries.

Electrical Distribution and Controls

DELTA CROMPTON HOLDINGS LTD

With effect from 1st January, 1989, the Group merged its cable and wire activities with those of Delta plc in a new company. Delta Crompton Holdings Ltd. The Group has a 36% shareholding in Delta Crompton Holdings, reflecting the profits and assets contributed to the merger, and has an option in 1992 to increase the shareholding to 49% at a price based on the first three years' trading profits. The scale of the merged company's operations is such as to maximise competitivenesss, particularly in the European market.

FASCO INDUSTRIES: SENSORS AND CONTROLS DIVISION

Around US\$54m was spent on seven strategic acquisitions by Fasco's Sensors and Controls Division.

LazerData and SenSym extend the technological base into solid state pressure and position sensors, while OptoSwitch and Clairex reinforce the optoelectronic sensor capability. The Allen-Bradley Variable Resistor Division acquisition gives a wider and stronger market position from which to launch new products, and Ocean State Thermotics and Transflex add flexible heaters to the temperature control range.

K K CROMPTON ALPS

On 31st January, 1989, the Group purchased the meter division of Alps Electric Instrument Co. Ltd for Yen 250m. Based in Nakajyo, Japan, Crompton Alps manufactures panel meters and measuring instruments.

AUGIER SA

On 31st July, 1989, the Group purchased Augier SA, a privately owned French company, for a total consideration of FF60m including assumed debt. Located near Nice, Augier SA is a leading French supplier of both public lighting and airport lighting transformers and controls.

Mechanical Specialised Equipment

STANDARD AERO LTD

On 4th October, 1989, the Group purchased Standard Aero Ltd of Canada from Avcorp Industries Inc for C\$106m in a combination of cash and assumed debt. Standard Aero, based in Winnipeg, is Canada's largest independent aircraft engine repair and overhaul business servicing mainly turbo-prop and turbo-shaft engines. Standard Aero's activities closely parallel those of the Group's Australian interests Hawker Pacific and Hawker de Havilland.

Winsdor Aerospace Ltd and Middleton Aerospace Corporation

On 5th January, 1990, Hawker Siddeley Canada purchased the assets of Windsor Aerospace Ltd based in Ontario, and Middleton Aerospace Corporation, based in Massachusetts, for US\$25m in cash. Both Windsor and Middleton manufacture machined components for the aerospace industry and their business base will complement that of Orenda division.

Morgan Equipment (Aust) Pty Ltd

On 10th July, 1989, the Group purchased Morgan Equipment (Aust) Pty Ltd, a privately owned Australian company for A\$16m in cash. Morgan Equipment, based in Brisbane, is a distributor of mining machinery and has substantially strengthened Hawker Noyes in the mining and construction equipment markets throughout Australia.

Discontinued Activities

CROMPTON VIDOR

On 5th December, 1989, the Group sold the consumer battery division of Crompton Vidor Ltd to the Rayovac Corporation of the USA.

GARDINER, SONS & CO., LIMITED

On 18th December, 1989, the Group sold Gardiner, Sons & Co., Limited ("Gardiner"), which operates home improvement centres to Gardiner (Holdings) Limited, a company owned by A G P Allen and J Watson, directors of Gardiner, for an aggregate consideration of £5.05m in cash, which was approximately equal to the book value of the net assets at disposal. Net profits before tax of Gardiner for the year ended 31st December, 1988 were £789.000.

Significant shareholdings

As at 28th March, 1990, the Company has not been notified of an interest of any person amounting to 5% or more of any class of the share capital of the Company.

By Order of the Board D.R. Gilbert, Secretary 28th March, 1990

REPORT OF T AUDITORS

To the members of Hawker Siddeley Group Public Limited Company

We have audited the financial statements on pages 34 to 49 and pages 10 and 28 in accordance with Auditing Standards.

In our opinion the financial statements give a true and fair view of the state of affairs of the Company and the Group at 31st December. 1989 and of the profit and source and application of funds of the Group for the year then ended and have been properly prepared in accordance with the Companies Act 1985.

Price Waterhouse, Chartered Accountants Southwark Towers 32 London Bridge Street London SE1 9SY

28th March, 1990

ONSOLIDATED PROFIT AN OSS ACCOUNT

For the year ended 31st December, 1989	Notes	1989 £m	1988 ∫ m
Turnover	1	2,146	1,797
Trading profit excluding related companies		176.3	164-4
Add: Share of profits of related companies		22·1	19-2
Group trading profit	2	198-4	183-6
Add: Interest	3	3.7	0.1
Profit on ordinary activities before taxation		202·1	183.7
Less: Taxation on profit on ordinary activities	4	68-3	62.0
Profit on ordinary activities after taxation		133-8	121.7
Less: Interest of minority shareholders		10-2	10.8
Group profit after taxation attributable to Hawker Siddeley		123.6	110-9
(Less) Add: Extraordinary items after taxation	5	(16-9)	10.9
		106.7	121.8
Less: Dividends	6	49-6	44.6
Amount retained and employed in the Group	26	57-1	77.2
Earnings per ordinary share	7	62·5p	56·2p

CONSOLIDAT BALANCE SHEET

	Not e s	1989 £m	1988
Fixed assets			£m
Tangible assets	11	505.9	446.2
Investments	13	103-8	61.3
		609.7	507.5
Current assets			
Stocks	14	579.9	426.0
Debtors	15	579·1	448-4
Bank deposits and other short term investments		178∙ 9	224.8
Cash at bank and in hand		37.5	34.9
		1,375.4	1,134-1
Creditors: amounts failing due within one year			
Loans and overdrafts	16	68.7	23.3
Trade creditors		301.7	217.4
Other creditors	18	356.4	271.0
		726-8	511.7
Net current assets		648-6	622.4
Representing:			
Creditors: amounts failing due after more than one year			
Creditors: amounts failing due after more than	19	224·1	138-2
Creditors: amounts failing due after more than one year	19 20	224·1 10·0	
Creditors: amounts failing due after more than one year Debenture stocks and loans Other long term liabilities			30.6
Creditors: amounts failing due after more than one year Debenture stocks and loans Other long term liabilities Provisions for ilabilities and charges	20	10.0	138·2 30·6 88·3 5·2
Creditors: amounts failing due after more than one year Debenture stocks and loans Other long term liabilities Provisions for liabilities and charges Deferred taxation	20 21	10·0 135·2	30·6 88·3
Creditors: amounts failing due after more than one year Debenture stocks and loans	20 21	10·0 135·2 3·5	30·6 88·3 5·2
Creditors: amounts failing due after more than one year Debenture stocks and loans Other long term liabilities Provisions for liabilities and charges Deferred taxation Interest of minority shareholders Capital and reserves Called up share capital	20 21	10·0 135·2 3·5	30·6 88·3 5·2 87·2
Creditors: amounts failing due after more than one year Debenture stocks and loans Other long term liabilities Provisions for liabilities and charges Deferred taxation Interest of minority shareholders Capital and reserves	20 21 23	10·0 135·2 3·5 107·8	30·6 88·3 5·2
Creditors: amounts failing due after more than one year Debenture stocks and loans Other long term liabilities Provisions for liabilities and charges Deferred taxation Interest of minority shareholders Capital and reserves Called up share capital Share premium account	20 21 23 24	10·0 135·2 3·5 107·8	30·6 88·3 5·2 87·2 55·3 22·8
Creditors: amounts failing due after more than one year Debenture stocks and loans Other long term liabilities Provisions for liabilities and charges Deferred taxation Interest of minority shareholders Capital and reserves Called up share capital Chare premium account Revaluation reserve	20 21 23 24 24 24	10·0 135·2 3·5 107·8 55·4 24·2	30·6 88·3 5·2 87·2 55·3 22·8 67·2
Creditors: amounts failing due after more than one year Debenture stocks and loans Other long term liabilities Provisions for liabilities and charges Deferred taxation Interest of minority shareholders Capital and reserves Called up share capital	20 21 23 24 24 24 25	10·0 135·2 3·5 107·8 55·4 24·2 63·3	30·6 88·3 5·2 87·2 55·3

Sir Peter Baxendell, Chairman

A.K. Watkins, Managing Director and Chief Executive

D.G. Bury, Finance Director

SOURCE AND APPLICATION & FUNDS

For the year ended 31st December, 1989	1989	1988
Carrier of friends	£m	£m
Source of funds Profit before taxation	202-1	183.7
Depreciation and amounts written off fixed assets	54.1	52.3
Profits retained by related companies	(18·1)	(8.6)
Extraordinary items not resulting in movement	(10-1)	10 07
	(28-1)	(11.9)
of liquid funds Share capital issued by Hawker Siddeley	1.5	0.7
	3.3	-
Share capital issued by subsidiary Proceeds on disposal of subsidiaries	9.5	70.6
Sales of tangible fixed assets and investments	11·3	17.9
Sales of tangible fixed assets and investments		17.3
	235-6	304.7
Less: Taxation paid	53.3	57.3
Total source of funds	182.3	247.4
Application of funds		
Capital expenditure	87-1	88.5
Cost of businesses acquired in the year	156-8	51.8
Dividends paid to shareholders of Hawker Siddeley	47·7	43.4
Dividends paid to minority shareholders	4.0	3.6
Increase (decrease) in working capital:	4.0	3.0
Stocks	94.8	31.3
Debtors	74-1	22.0
Trade and other creditors	(105.4)	(54.6)
	(20.8)	17.6
Provisions and other long term liabilities	(20-0)	
Total application of funds	338.3	203.6
(Absorption)/generation of funds	(156-0)	43.8
Representing:		
Net funds at 1st January	98-2	45.9
Effect of changes in exchange rates	(18.6)	8.5
	79.6	54.4
(Absorption)/generation - as above	(156.0)	43.8
Net (borrowings)/funds at 31st December	(76-4)	98.2

The Group comprises Hawker Siddeley Group Public Limited Company Hawker Siddeleys and its subsidiaries. The principal accounting policies, set our heliow, have been supplemented on the implementation of the UK Accounting Standard on pension costs.

Accounting convention. The accounts have been prepared under the historical cost convention as modified by revaluations of certain properties and investments.

Consolidation principles. The consolidated accounts include the accounts of Hawker Siddeley and its subsidiary contpanies, and those of related companies, on the basis described below. The accounts of all subsidiaries are made up to 31st December. The principal operating companies are listed on pages 51 to 55. The effective date for consolidation of companies acquired is that on which an offer is declared unconditional in all respects. The results of companies disposed of are consolidated up to the date of disposal.

Goodwill, being the excess of the cost of an acquisition over the fair value of the relevant net assets, is charged to reserves.

The Group's share of the profits and net assets of related companies, not being subsidiaries, in which a substantial interest is held for trading and commercial reasons, has been included in the consolidated accounts based on the audited accounts of these companies made up to varying accounting dates in 1989. Details of related companies are included on pages 51 to 55.

Translation of foreign currencles. The assets and liabilities of overseas subsidiaries have been expressed in sterling at the rates ruling at 31st December, 1989.

Trading results of overseas subsidiaries have been expressed at the average of the rates ruling during the year. Differences arising from the effect of changes in exchange rates on overseas net assets are treated as a movement in reserves.

Turnover is sales to third parties and is determined by reference to the selling values of goods delivered and services rendered during the year.

Trading profit jother than on long term contracts; is taken up when goods are delivered and title passes to the customer or when services are rendered, and is stated after making allowance for the estimated cost of after sales service and other expenditure to be incurred subsequently. In the case of long term contracts, namely those extending over more than one year, a prudent level of profit attributable to the proportionate deliveries is taken up if the final outcome of such contracts can be reliably assessed.

On all contracts full provision is made for any losses in the year in which they are first foreseen.

Pension costs. Contributions to the Group's defined benefit pension schemes are charged to profits so as to spread the cost of pensions over the anticipated service lives of employees. In previous years, the charge was the actual amount of contributions payable to the schemes.

For the Group's defined contribution schemes, contributions are charged as they become payable.

Research and development expenditure (other than that specifically recoverable under contracts) is written off in the year in which it is incurred.

Income from investments. Dividends received from UK investments are included at the amount received together with the imputed tax credit. Income received from overseas investments is credited before deducting withholding taxes.

Tangible fixed assets and depreciation. Freehold and long leasehold properties acquired before 31st December, 1983 are stated at valuation at that date; subsequent additions and all other fixed assets are stated at cost to the Group, after deducting government grants received. The basis of depreciation is to write off the cost or valuation of buildings where appropriate, and the cost less government grants of other assets over their estimated useful lives on a straight line basis.

The rates of depreciation vary according to the type of asset and business but are in general: freehold buildings -2%; leasehold buildings where the lease is 50 years or more -2%; leasehold buildings where the lease is for less than 50 years - over the term of the lease; plant and machinery - 10% or 20% according to the nature of the asset.

Stock and work in progress is stated at the lower of cost (including an appropriate proportion of overheads) and estimated realisable value, less progress payments. The estimated realisable value has been arrived at having regard to estimated costs to completion of contracts.

Deferred taxation. Provision is made for deferred taxation arising from timing differences to the extent that the liability will become payable in the foreseeable future. Timing differences are due primarily to the excess of tax allowances on fixed assets over the corresponding depreciation charged in the accounts. No provision is made either for the patential tax on capital gains which would arise in the event of disposal of properties at their valued amounts or for tax which might be payable in the event of distribution of retained profits of overseas subsidiaries or related companies.

1 Turnover	1989	1988
The analysis of Group turnover by activity is as shown in the	£m	£m
Financial tables on page 10 and the analysis by geographical markets is as follows:		
United Kingdom	628	603
USA	694	496
Australasia	311	229
Europe	163	146
Canada	124	102
Far East	95	96
Africa Middle East	56	61
South and Central America	53 22	44
	2,146	1,797
2 Group Trading Profit		
The analysis of Group profit by activity is as shown in the		
Financial tables on page 10 and is arrived at after charging:		
Wages and salaries	541·0	450.3
Social security costs	44.0	37.8
Other pension costs	10.4	13.7
Staff costs	595.4	501.8
Changes in stocks of finished goods and work in progress	(54.7)	(33.4)
Raw materials and consumables	981.0	795.8
Other external charges	403-0	324.0
Depreciation and amounts written off fixed assets	54-1	52.3
and after crediting:		
Surplus on property disposals net of related		
restructuring and reorganisation costs	8.3	7-7
Income from investments:		
Listed (including £1-8m (1988: \pounds 1-7m) from related companies) Unlisted (including £2.2m (1988: \pounds 0-2m) from related companies)	1⋅8 3⋅0	1·7 0·4
Included in the amounts charged above are the following items:		01.7
Research and development costs Hire of plant and machinery	27.4	21.7
Rental of premises	6·9 11.0	5-7 8-8
Auditors' remuneration	11·9 2·6	2.3
Amounts relating to finance leases are not material in the	***************************************	
context of the Group and the amounts shown above for hire of		
plant and machinery and for rental of premises represent the		
total charged in respect of all leases.		
3 Interest		
Receivable on bank deposits and other short term investments	38.0	20.9
Less payable on:		
Debenture stocks of Hawker Siddeley	0.6	0.6
Loans repayable over a period longer than five years	12.7	9.1
Loans wholly repayable within five years	7.4	5.4
Bank loans and overdrafts	13.6	5·7
	34.3	20.8
	3.7	0.1

	£m	£m
Corporation tax at 35%	35.5	35.5
UK deferred taxation Double taxation relief	- (7·2)	(2·9) (1·4)
Overseas taxation	31.4	24.2
	59.7	55.4
Related companies:		
Corporation tax at 35%	2.9	3.3
Overseas taxation	5.7	3.3
	8.6	6.6
	68.3	62.0
5 Extraordinary items		
Loss on closure and disposal of businesses Profit on sale of businesses	(28·4) 0·3	$\frac{(14\cdot4)}{28\cdot2}$
Tax (including £8.7m (1988: $f(0.4)$ m) of deferred tax)	(28·1) 10·0	13·8 (5·9)
	(40.4)	7.0
Minority interest	(18·1) 1·2	7·9 3·0
	(16.9)	10.9
On 5 ¹ ·2% cumulative preference shares (3·85% net of tax) On ordinary shares: Interim of 10·0p per share paid 29th December, 1989 (1988: 8·4p) Recommended final of 15·0p per share to be paid on 2nd July, 1990 (1988: 14·1p)	19·7 29·7	16·6 27·8
	49.6	44.6
7 Earnings per Ordinary Share Earnings per ordinary share amount to 62.5p (1988: 56.2p). The calculation is based on earnings of £123.4m (1988: £110.7m), as shown below, and 197.4m ordinary shares being the average number in issue throughout the year. Group profit after taxation attributable to Hawker Siddeley as shown in the consolidated profit and loss account Less: Preference dividend	123· 6 0·2	110·9 0·2
Earnings	123-4	110-7
8 Emoluments of the Directors of Hawker Siddeley	£000	£000
	53	
Aggregate emoluments: East	71.5	42
Fees		785
Aggregate emoluments: Fees Management remuneration and pension scheme contributions Pensions paid in respect of former Directors	981 1 9 0	785 170

1989

1988

4 Taxation on Profit on Ordinary Activities

8 Emoluments of the Directors of Hawker Siddeley continued

b The numbers of Directors whose emoluments, excluding pension scheme contributions, fell within various ranges are shown in the following table:

Emoluments		.000
Emoluments	1989	1988
$\mathcal{L} = 10.001 - \mathcal{L} = 15.000$	5	4
£ $70.001 - £ 75.000$	_	1
£ $80.001 - £ 85.000$	1	-
£ $85.001 - £ 90.000$	-	2
£ $90.001 - £ 95,000$	1	_
£ 95.001 - £100.000	_	2
£100.001 - £105.000	2	_
£105.001 - £110.000	1	_
£110.001 - £115,000	1	_
£150,001 - £155,000	_	1
£155,001 - £160,000	1	_
The emoluments included above		

The emoluments included above

For the Chairman were:	£82,842	£75.000
For the highest-paid Director were:	£158,349	£154.365

9 Emoluments of Employees in the United Kingdom

The number of employees of the Group in the United Kingdom, excluding Directors of Hawker Siddeley, whose emoluments, excluding pension scheme contributions, exceeded £30,000 is shown in the following table:

~	0	
Emoluments		
£ 30,001 - £ 35,000	33	56
£ $35.001 - £ 40,000$	39	27
£ $40,001 - £ 45,000$	20	16
£ $45,001 - £ 50,000$	16	8
£ $50.001 - £ 55.000$	8	8
£ $55,001 - £ 60,000$	8	3
£ $60,001 - £ 65,000$	2	2
£ $65.001 - £ 70,000$	1	2
£ $70,001 - £ 75,000$	-	1
£ $75,001 - £ 80,000$	1	1
£ $80,001 - £ 85,000$	1	_
£ $85,001 - £ 90,000$	3	_
£ $95,001 - £100,000$	1	-

10 Analysis of Average Number of Employees	
Analysis by activity:	
Electric motors and generators 9,600	8,600
Electrical distribution and controls 11,200	10,500
Electrical specialised equipment 7,600	7.400
Diesel engineering 3,900	4,100
Mechanical specialised equipment 9,300	9,400
Continuing businesses 41,600	40,000
Discontinued activities 1,000	1.800
42,600	41.800
Geographical analysis:	
United Kingdom 21,200	21,900
North America 12,700	11.900
Australasia 5,700	5.100
Other 3,000	2,900

42,600

41.800

11 Tangible Fixed Assets	Freehold	Leasehold	Plant and	
	property	property	machinery	Total
	£m	£m	£m	£m
Cost or valuation:			.~	~
At 31st December, 1988	173-4	24.4	577.4	775-2
Effect of changes in exchange rates	8.2	$2 \cdot 0$	39.6	49.8
Additions at cost less government				
grants	13.8	4-()	65.7	83.5
Cost of assets of acquisitions in year	11.9	0.3	17.7	29.9
Disposals	(15.5)	(1.7)	(50.9)	(68-1
At 31st December. 1989	191.8	29.0	649.5	870-3
Accumulated depreciation:				
At 31st December, 1988	14.3	4.2	319.2	337.7
Effect of changes in exchange rates	0.8	0.5	18.0	19.3
Charge for year	3.6	1.4	49-1	54.1
Disposals	(1.6)	(0.4)	(34.5)	(36.5)
At 31st December, 1989	17.1	5.7	351.8	374-6
Net book amount at 31st December. 1989	174.7	23.3	297.7	495.7
Jigs. tools and equipment at cost less amounts written off				10.2
				505.9
Net book amount at 31st December. 1988	159-1	20.2	258·2	437.5
Jigs. tools and equipment at cost less amounts written off				8.7
				446.2
				440.7

The parent company tangible fixed assets comprise freehold property with a valuation and depreciation of £7·1m and £0·6m (1988: £7·1m and £0·5m) respectively, and plant and machinery with a cost and depreciation of £2·3m and £1·5m (1988: £2·0m and £1·3m) respectively.

Freehold and long leasehold properties include £138-1m (parent company £7-1m) which were valued at 31st December, 1983, the original cost of which was £87-6m (parent company £1-4m).

Net book amount	129.6	107-1
•		
Depreciation	40.7	36.5
Cost	170.3	143.6
and the depreciation thereon are as follows:	£m	£m
The original cost to the Group of land and buildings	1989	1988

Leasehold property includes short-term leases at a net book amount of £5.7m (1988: £4.0m).

11 Tangible Fixed Assets continued

Leasing operations.

The Group's Canadian subsidiary, CGTX Inc (55%) owned by Hawker Siddeley Canada Inc), is in the business of leasing railway rolling stock to North American railroad operators.

	1989	1988
	£m	£m
Amounts included in plant and machinery:		
Cost	159.0	127.4
Accumulated depreciation	54.5	44.2
Net book amount	104-5	83.2
Pledged as security for mortgage equipment notes (see note 19)	52.2	48.0
Rental income from these operations included in sales	27.1	19.8

12 Capital Commitments

Commitments of the Group for capital expenditure not included in the balance sheet at 31st December. 1989 amounted to $\mathbf{£28m}$ (1988: $\mathbf{£34m}$); capital expenditure authorised by the Directors but not committed at 31st December. 1989 amounted to approximately $\mathbf{£107m}$ (1988: $\mathbf{£79m}$).

13 Fixed Asset Investments	Related		Other			
	comp	anies	investn	nents	Tot	al
	1989	1988	1989	1988	1989	1988
	£m	£m	£m	£m	£m	£m
Cost or share of net assets	100.3	59.5	5.0	2.7	105.3	62.2
Less: Amounts written off			1.5	0.9	1.5	0.9
Net book amount	100-3	59.5	3.5	1.8	103-8	61.3
Increase in net book amount in 1989:						
Effect of changes in exchange rates	4.6		0.2		4.8	
Additions Share of related companies' retained	38.3		2⋅1		40-4	
reserves	(2·1)		_		(2·1)	
Amounts written off	` _		(0.6)		(0.6)	
	40-8		1.7		42.5	
Included in the net book amounts shown above are investments listed on recognised stock exchanges						
outside the UK of	28.8	24.9	0.1	0.1		
whose market values were	41.8	41.0	1.1	0.3		
Other investments - unlisted:						
Aggregate profits less losses						
attributable to the Group in respect of accounts received in 1989:						
Before tax					1.3	0.6
After tax					0.8	0.4
Accumulated undistributed profits					-	
less losses since acquisition						
attributable to the Group					2.0	1.2

14 Stocks	1989	1988
	£m	£m
Raw materials and consumables	150.0	124.2
Long term contract work in progress	130.0	82.8
Other work in progress	178-2	137.6
Finished goods and goods for resale	202.0	157-8
	660-2	502.4
Less: Progress payments	80.3	76.4
	579.9	426-0
The replacement cost of stocks is not materially different from the amounts stated above.		
15 Debtors		
Trade debtors	457·5	371-6
Amounts owed by related companies	1.7	0.8
Other debtors (including £27-9m (1988: £16-0m) falling due		
after more than one year)	85.2	49.4
Amounts recoverable on contracts	17.4	10.8
Prepayments and accrued income	17.3	15.8
	579-1	448.4
16 Loans and Overdrafts		
Debenture stocks and loans	6.4	3.2
Bank loans and overdrafts	62.3	20.1
	68.7	23.3

17 Bank Guarantees and Contingent Liabilities

Hawker Siddeley has guaranteed bank overdrafts of certain subsidiaries which at 31st December, 1989 amounted to £47.8m (1988: £9.7m). There are contingent liabilities arising in the ordinary course of business relating principally to bonds outstanding and claims involving products manufactured or distributed by the Group, but in the opinion of the Directors adequate provision has been made for losses which might fall on the Group.

An overseas subsidiary has been assessed to UK corporation tax on the basis that it is resident in the UK. The directors have received independent legal advice that it has a strong case for resisting the Revenue's assessments.

Should the Inland Revenue assessments be upheld the additional liability to tax and interest, for which no provision has been made, would amount to approximately £25 million.

18 Other Creditors		
Payments received on account	100.8	68.0
Bills of exchange payable	8-1	3.9
Taxation	70-4	54.4
Social security	8-4	7.9
Other creditors	45-6	42.4
Accruals and deferred income	93.3	66.5
Proposed dividend	29.8	27.9
	356-4	271.0

19 Debenture Stocks and Loans	1	989	19	88
Repayable over a period longer than	£m	£m	£m	£m
five years				
Borrowings of subsidiaries:				
US\$ Commercial paper		146.1		63.2
Mortgage equipment notes – secured on				
railway rolling stock leasing fleet (see note 11)				
Due by instalments between 1990 and 2000		11.1		11.5
interest rates vary between 8 ⁷ 8% and 11 ¹ 4% Other borrowings		11.1		11.9
(secured £5.5m - 1988; £7.7m)		5.6		11.3
(secured 20 011 1000. £77111)			-	
		162.8		86.0
Repayable within five years		minimization in a street and the str		
Borrowings of Hawker Siddeley:				
714% Debenture stock 1990/92 (secured)	15.6		15.6	
8 ³ ⁴ % Debenture stock 1990/92 (secured)	2⋅8		2.8	
Less: Redeemed to date and cancelled	(10.1)		(10·1)	
		8.3		8.3
US\$50m 13 ¹ 4% Notes due 1991	31.1		27.6	
Bank loans	1.1		1.4	
		32.2		29.0
		40.5		37.3
Borrowings of subsidiaries:				0, 0
Mortgage equipment notes – secured on				
railway rolling stock leasing fleet (see note 11)		17.6		15.1
Other borrowings				
(secured £4·8m – 1988: £2·7m)		42.6		4.6
		100.7		57.0
Total debenture stocks and loans		263.5		143.0
Less: Instalments repayable within one				
year, included in current liabilities		39.4		4.8
		224-1		138.2
Representing instalments repayable:			•	
Between one and two years hence		37.4		5.3
Between two and five years hence		33.0		57-6
In five years or more		153.7		75.3
		224.1	•	138-2
			•	

The aggregate amount of bank loans and overdrafts was **£62.9m** (1988: $£20\cdot8m$).

Redemption of the Hawker Siddeley Debenture stock is by annual sinking funds of £0.3m (7 $^{1}4\%$ stock) and £0.06m (8 $^{3}4\%$ stock). At the option of the Company this obligation may be satisfied by purchase in the market.

Commercial paper is short term borrowings issued at a discount in the commercial paper markets in Europe. However, for balance sheet purposes, this paper is classified as a long term liability as it is the intention to renew the borrowings as they fall due, or to refinance the borrowings through existing long term bank facilities. This paper is guaranteed by Hawker Siddeley.

20 Other Long Term Liabilities		1989	1988
		£m	£m
Taxation		5.5	26.7
Other creditors		4.5	3.9
		10.0	30-6
	-		
21 Provisions for Liabilities and Charges	Other		
	provisions	Pensions	Total
	£m	£m	£m
At 31st December, 1988	84.9	3.4	88.3
Effect of changes in exchange rates	5.5	0.5	6.0
Amounts set aside in 1989	84-9	(0.9)	84.0
Expenditure in 1989	(41.7)	(1.4)	(43.1)
At 31st December, 1989	133-6	1.6	135.2

Other provisions include after sales service and reorganisation.

There are pension commitments to past Directors amounting to £25.000 per annum which are not included in provisions.

22 Pension Costs

The Group operates a number of pension schemes, the majority being defined benefit arrangements. Total pension costs were £10-4m (1988: £13.7m) of which £5-5m (1988: £4-8m) relate to overseas schemes mainly in the USA, Canada and Australia. The main UK scheme is the Hawker Siddeley Pension Fund. The assets of this scheme are held in a separate trustee-administered fund. The latest actuarial valuation of this scheme was carried out by independent actuaries as at 31st March. 1989 using the projected unit method. The principal assumptions adopted were that the long term annual rate of return on investments would be 9.5%, annual dividend increases would be 5% and the average annual increases in pensionable salaries and pensions in payment would be 7.5% and 5% respectively. The actuarial value of the assets was sufficient to cover 154% of the value of the projected benefits to which members will be entitled for their membership up to the valuation date. The market value of the assets of the schemes as at the date of the actuarial valuation was £316-1m.

The assets of the main overseas schemes are also held in separate trustee-administered funds and the schemes were fully funded at their most recent valuation dates.

23 Deferred Taxation	1989	1988
	£m	£m
In respect of capital allowances	10.9	13.3
Other UK timing differences	(8·7)	(3.9)
Advance corporation tax	(1.6)	(6.7)
UK corporation tax	0.6	2.7
Overseas taxation	2.9	2.5
	3.5	5.2

There is deferred taxation of £25.5m (UK £6.0m; Overseas £19.5m) not provided in the accounts as this relates to timing differences for which no liability will become payable in the foresecable future.

Share Capital of Hawker Siddeley

NOTES TO THE CONSOLI

Authorised		Allotted and fully p	
1989	1988	1989	1988
£m	£m	£m	£m
6.0	6.0	6.0	6.0
65·O	65.0	49-4	49.3
71.0	71-0	55.4	55.3
	1989 £m 6-0 65-0	1989 1988 £m £m 6.0 6.0 65.0 65.0	1989 1988 1989 £m £m £m 6.0 6.0 6.0 65.0 65.0 49.4

Issued during the year

During the year, 311.782 ordinary shares of 25p each were issued following exercise of options under the Executive Share Option Scheme. Overseas Executive Share Option Scheme and Savings Related Share Option (SAYE) Scheme. The aggregate consideration received in respect of these allotments was £1.5m, of which £1.4m represented a premium over the nominal value.

Shares under option

The options to subscribe for ordinary shares of 25p held by Group employees were as follows:

At 31st December, 1989	1,358,742	853,885
Options lapsed	(82,088)	(4,870)
Options exercised	(76,782)	(235,000)
New options issued	152,130	202,965
At 31st December, 1988	1,365.482	890.790
	SAYE Scheme	Executive Schemes
		UK and Overseas

Options under the Executive Schemes are normally exercisable 3-10 years after grant and are currently exercisable at various dates up to 1999 at prices ranging between £4.55 and £6.76.

Options under the SAYE Scheme are normally exercisable 5 years after grant and are currently exercisable at various dates up to 1994 at prices ranging between f = 0.02.

25 Revaluation Reserve	Hawker Siddeley	Subsidiaries	Related companies	Total
	£m	£m	£m	£m
At 31st December, 1988	5.4	56.8	5.0	67.2
Effect of changes in exchange rates	-	2.1	0.2	2.3
Transfer to profit and loss account in				
respect of depreciation and disposals	(0.1)	(6.1)	-	(6.2)
At 31st December, 1989	5.3	52.8	5.2	63.3
26 Profit and Loss Account	Hawker Siddeley	Subsidiaries	Related companies	Total
	£m	£m	£m	£m
At 31st December, 1988	73.9	530.3	30.9	
Exchange differences on translation				635-1
of net assets				635-1
	(9.2)	25.9	4.4	635-1
Amount retained in 1989	(9·2) 7·0	25·9 40·5	4·4 9·6	
	` '			21.1
Amount retained in 1989 Goodwill on acquisitions Transfer from revaluation reserve	` '	40.5	9.6	21·1 57·1

27 Goodwill on Acquisitions		Fair	
	Book	value	
	value	adjustment	Total
	£m	£m	£m
Fixed tangible assets	34.5	(4.6)	29.9
Investment in related companies	25.9		25.9
	60.4	(4.6)	55.8
Stocks	59-7	(3.7)	56.0
Debtors	46-1	(2.9)	43.2
	105.8	(6.6)	99.2
Total assets	166-2	(11.2)	155.0
Creditors	(37.3)	(3.2)	(40.5)
Provisions	(1·2)	(18.9)	(20.1)
Deferred taxation	5.1	(5.1)	
Net assets	132.8	(38·4)	94.4
Consideration Net borrowings assumed			108·8 48·0
Cost Add: Assets contributed to Cables merger			156·8 22·3
Total			179.1
Goodwill on acquisitions			84-7

Adjustments have been made to the book values of the net tangible assets acquired to reflect their fair values to the Group and to provide for costs arising as a consequence of the acquisitions.

Adjustments amounting to £19.5m were made to restate the net assets of acquisitions under Group Accounting Policies and £18.9m of provisions for reorganisation and other acquisition costs were created. During the year £7.9m of fair value provisions were utilised and no provisions were released unused or applied for another purpose.

28 Restatement of Comparative Figures

Following the merger of the Group's cable businesses with those of Delta plc the share of profits from this activity is now included in related company profits. For comparative purposes 1988 sales and trading profits have been restated to treat the cable business as though it were a related company in the period.

29 Approval of Financial Statements

These financial statements were approved by a duly appointed and authorised committee of the Board of Directors on 28th March, 1990.

Directors' Interests in Shares of Hawker Siddeley

subscribe for	
ordinary	

**Options to-

	Prefere	nce	Ordir	iary	ordir	iar <i>i</i> .
	share	:s	shar	es	shai	res
	1989	9	198	39	198	39
	31st Dec. 1	lst Jan. 3	1st Dec.	1st Jan. 3	1st Dec.	1st Jan.
Sir Lindsay Alexander	250	250	1,000	1.000	-	-
Sir Peter Baxendell	-	_	5,000	5.000	-	_
Mr D.G. Bury	-	_	1,000	200	33,923	33,233
Sir James Hamilton	-	_	500	500	-	-
Mr C. Hampson	-	-*	500	-*	-	-*
Mr Q. Hazell	-	_	8,000	5,000	-	_
Mr T.W.B. Sallitt	450	450	200	200	37,302	40,461
Dr A.K. Watkins	-	-*	1,500	1.500*	15,698	-*
Mr R.A. Willford	450	450	200	200	33,988	33.988
Sir Rowland Wright	_	_	2,000	2,000	-	-

^{*}At date of appointment.

OTHER INFORMATION

Dividend and interest payment dates

714% Debenture stock	30th June and 31st December
8 ³ 4% Debenture stock	30th June and 31st December
512% Cumulative preference shares	1st February and 1st August
US\$50m 131/4% Notes due 1991	20th September
Ordinary shares: In respect of the year ended	
31st December, 1989	
Interim dividend (10·0p per share)	29th December, 1989
Recommended final dividend (15.0p per share)	2nd July, 1990

Number of s	share and	debenture	holders
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At 31st December

	32,700	33.900
Debenture holders	1,200	1,200
Preference shareholders	900	900
Ordinary shareholders	30,600	31,800
	1989	1988

Capital gains tax

For the purposes of capital gains tax, the market values of Hawker Siddeley's shares were as follows:

,	Ordinary shares	$5^1 z^{n_0}$ Cumulanve
	of 25p each	preference shares
At 6th April, 1965		
for base cost purposes only	37 ¹ / ₂ p	74p
At 31st March, 1982		
for indexation purposes	299p	35:41

The 'close company' provisions of the Income and Corporation Taxes Act 1988 do not apply to Hawker Siddeley.

^{**}These options are held under the Executive Share Option Scheme. In addition, at 31st December, 1989 Mr D.G. Bury and Mr T.W.B. Sallitt each held options over 1.701 ordinary shares under the Savings Related Share Option Scheme (see note 24). All the above interests are beneficial. There have been no changes in Directors' interests between 31st December, 1989 and the date of this Report.

PARENT COM! / BALANCE SHEET

At 31st December, 1989 Notes	1989 £m	1988 £m
Fixed assets		£.m
Tangible assers 11	7⋅3	7.3
nvestments in subsidiaries	67.8	70.5
	75.1	77.8
Amounts owed by Group companies		
Loan accounts (repayable on demand)	311.8	316-8
Loan accounts (repayable 1990)	31.1	27.6
	342.9	344-4
Current assets		
Amounts owed by Group companies	80.9	44.0
Advance corporation tax recoverable	65.6	60.9
Other debtors	2.2	2.3
Bank deposits and other short term investments	0·9 4·2	1·9 9·0
Cash at bank and in hand	4.2	
	153.8	118.1
Creditors: amounts failing due within one year		
Amounts owed to Group companies	0.3	13.3
Loans and overdrafts	3·1 16·5	3·2 14·8
Faxation Dividends	29·8	27.9
Other creditors	4.0	4.3
	53.7	63.5
Net current assets	100.1	54.6
	518.1	476.8
Total assets less current liabilities	218.1	470.0
Representing: Amounts owed to Group companies		
Loan accounts (repayable on demand)	322.0	283.4
Creditors: amounts failing due after more than one year		
Debenture stocks and loans	39-4	36.0
Capital and reserves		55.0
Called up share capital 24	55.4	55·3
Share premium account 24 Revaluation reserve 25	24·2 5·3	22·8 5·4
Revaluation reserve 25 Profit and loss account 26	71·8	73-9
	156.7	157.4
shareholders' funds		_ · · ·
Shareholders' funds		

In accordance with Section 228(7) of the Companies Act 1985 no separate profit and loss account has been presented for the parent company.

Sir Peter Baxendell, Chairman

A.K. Watkins, Managing Director and Chief Executive

D.G. Bury, Finance Director

FIVE YEAR REVIEW

UK companies - Home UK companies - Export 285 309 329 348 332 902 903 864 853 849 Overseas companies 1,244 894 821 703 713 2,146 1.797 1.685 1.556 1.562 Trading Profit Electric motors and generators Electrical distribution and controls Electrical specialised equipment Diesel engineering 18-3 14-7 13-7 7-2 16-1 Diesel engineering 19-3 14-7 13-7 13-7 10-9 Drofit attributable to Hawker Siddeley 19-5 18-3 16-2 18-8 18-9 18-9 18-9 18-9 18-9 18-9 18-9		1989	1988	1987	1986	1985
UK companies - Home UK companies - Export 285 309 329 348 332 902 903 864 853 849 Overseas companies 1,244 894 821 703 713 2,146 1.797 1.685 1.556 1.562 Trading Profit Electric motors and generators Electrical distribution and controls Electrical specialised equipment Diesel engineering 18-3 14-7 13-7 7-2 16-1 Diesel engineering 19-3 14-7 13-7 13-7 10-9 Drofit attributable to Hawker Siddeley 19-5 18-3 16-2 18-8 18-9 18-9 18-9 18-9 18-9 18-9 18-9		£m	£m	£m	£m	£m
Section Sect	Turnover					
Overseas companies 1,244 894 821 703 713 2,146 1.797 1.685 1.556 1.562 Trading Profit Electric motors and generators 44-5 30-4 26-6 22-2 20-3 Electrical distribution and controls 247-0 52-2 46-6 34-7 28-7 Electrical specialised equipment 38-0 32-4 29-4 27-5 25-1 Diesel engineering 16-3 14-7 13-7 7-2 16-1 Mechanical specialised equipment Discontinued activities (1-2) 9-9 1-4 6-3 12-4 Trading profit 198-4 183-6 162-4 144-4 149-4 141-4	UK companies - Home					
1,244 894 821 703 713 713 7146	UK companies - Export	285	309	329 	348	332
2,146 1.797 1.685 1.556 1.562			903	864	853	849
Trading Profit Electric motors and generators 44-5 30-4 26-6 22-2 20-3 28-6 22-2 20-3 28-6 22-2 20-3 28-7	Overseas companies	1,244	894	821	703	713
Electric motors and generators Electrical distribution and controls Electrical distribution and controls Electrical specialised equipment 38-0 32-4 29-4 27-5 25-1 Diesel engineering 16-3 11-7 13-7 7-2 16-1 Mechanical specialised equipment Discontinued activities (1-2) 9-9 1-4 6-3 12-4 Trading profit 198-4 Interest 183-6 162-4 114-4 149-4 Interest 3-7 0-1 0-8 7-7 10-9 Profit before taxation Taxation and minority interests 78-5 72-8 67-5 64-7 65-3 Profit attributable to Hawker Siddeley 123-6 110-9 95-7 87-4 95-0 Capital Employed Shareholders' funds 777-7 780-4 721-3 760-5 821-6 Minority interests 107-8 87-2 95-2 102-9 102-7 Deferred taxation 3-5 5-2 8-8 9-3 16-4 Payments received on account Net borrowings/(funds)* 76-4 (98-2) 1,066-2 842-6 832-4 871-7 817-4 Represented by: Fixed assets Net current assets (including provisions and other long term liabilities) 456-5 1,066-2 842-6 832-4 871-7 817-4 Statistics Return on capital employed Return on sales (excluding related) 8-296 Return on sales (excluding related) 8-296 Earnings per ordinary share 62-5p 56-2p 48-5p 44-5p 44-5p 44-5p 44-5p 44-5p 44-5p 44-5p		2,146	1.797	1.685	1,556	1,562
Electrical distribution and controls Electrical distribution and controls Electrical specialised equipment Diesel engineering 16-3 14-7 13-7 13-7 16-1 Mechanical specialised equipment Discontinued activities (1-2) 9-9 1-4 6-3 12-4 Trading profit 198-4 Interest 1-0 188-7 10-9 Profit before taxation Taxation and minority interests 78-5 72-8 67-5 64-7 65-3 Profit attributable to Hawker Siddeley 123-6 110-9 102-7 Capital Employed Shareholders' funds Minority interests 107-8 87-2 29-2 102-9 102-7 Deferred taxation 3-5 5-2 8-8 9-3 16-4 Payments received on account Net borrowings/(funds)* 76-4 1,066-2 842-6 832-4 871-7 817-4 Represented by: Fixed assets Net current assets (including provisions and other long term liabilities) 1,066-2 842-6 832-4 871-7 817-4 817-4 Statistics Return on capital employed Return on sales (excluding related) Return on sales (excluding related) Earnings per ordinary share 62-5p 56-2p 48-5p 44-5p 44-5p 44-5p 44-5p 44-5p 44-5p 44-5p	Trading Profit					
Diesel engineering 16-3 14-7 13-7 7-2 16-1	Electric motors and generators	44.5				
Diesel engineering		47.0				
Mechanical specialised equipment Discontinued activities 53-8 (1-2) 44-0 (1-2) 44-7 (1-2) 46-5 (1-2) 46-8 (1-2) 46-9 (1-2)	- · ·					
Discontinued activities (1.2) 9.9 1.4 6.3 12.4 Trading profit 198.4 183.6 162.4 144.4 149.4 Interest 3.7 0.1 0.8 7.7 10.9 Profit before taxation 202.1 183.7 163.2 152.1 160.3 Taxation and minority interests 78.5 72.8 67.5 64.7 65.3 Profit attributable to Hawker Siddeley 123.6 110.9 95.7 87.4 95.0 Capital Employed Shareholders' funds 777.7 780.4 721.3 760.5 821.6 Minority interests 107.8 87.2 95.2 102.9 102.7 Deferred taxation 3.5 5.2 8.8 9.3 16.4 Payments received on account 100.8 68.0 53.0 45.4 33.0 Net borrowings/(funds)* 76.4 (98.2) (45.9) (46.4) (156.3) 1,066.2 842.6 832.4 871.7 817.4 Represented by: Fixed assets (including provisions and other long term liabilities) 456.5 335.1 357.8 352.2 286.4 1,066.2 842.6 832.4 871.7 817.4 Statistics Return on capital employed 18.6% 21.8% 19.5% 16.6% 18.3% Return on sales (excluding related) 8.2% 9.1% 84.4% 81.9% 8.9% Earnings per ordinary share 62.5p 56.2p 48.5p 44.3p 48.1p		16.3				
Trading profit		53⋅8				
Interest 3.7 0.1 0.8 7.7 10.9 Profit before taxation 202.1 183.7 163.2 152.1 160.3 Taxation and minority interests 78.5 72.8 67.5 64.7 65.3 Profit attributable to Hawker Siddeley 123.6 110.9 95.7 87.4 95.0 Capital Employed Shareholders' funds 777.7 780.4 721.3 760.5 821.6 Minority interests 107.8 87.2 95.2 102.9 102.7 Deferred taxation 3.5 5.2 8.8 9.3 16.4 Payments received on account 100.8 68.0 53.0 45.4 33.0 Net borrowings/(funds)* 76.4 (98.2) (45.9) (46.4) (156.3) 1,066.2 842.6 832.4 871.7 817.4 Represented by: Fixed assets 609.7 507.5 474.6 519.5 531.0 Net current assets (including provisions and other long term liabilities) 456.5 335.1 357.8 352.2 286.4 1,066.2 842.6 832.4 871.7 817.4 Statistics Return on capital employed 18.6% 21.8% 19.5% 16.6% 18.3% Return on sales (excluding related) 8.2% 9.1% 8.4% 8.1% 8.9% Earnings per ordinary share 62.5p 56.2p 48.5p 44.3p 48.1p	Discontinued activities	(1.2)	9.9	1.4	6.3	12-4
Interest 3.7 0.1 0.8 7.7 10.9	Trading profit	198-4	183.6	162-4	144.4	149-4
Taxation and minority interests 78.5 72.8 67.5 64.7 65.3 Profit attributable to Hawker Siddeley 123.6 110.9 95.7 87.4 95.0 Capital Employed Shareholders' funds 777.7 780.4 721.3 760.5 821.6 Minority interests 107.8 87.2 95.2 102.9 102.7 Deferred taxation 3.5 5.2 8.8 9.3 16.4 Payments received on account Net borrowings/(funds)* 76.4 (98.2) (45.9) (46.4) (156.3) 1,066.2 842.6 832.4 871.7 817.4 Represented by: Fixed assets Net current assets (including provisions and other long term liabilities) 456.5 335.1 357.8 352.2 286.4 1,066.2 842.6 832.4 871.7 817.4 Statistics Return on capital employed Return on sales (excluding related) 8.2% 9.1% 8.4% 8.1% 8.9% 48.1p 48.1p 48.1p	Interest	3.7	0.1	0.8	7.7	10.9
Profit attributable to Hawker Siddeley 123-6 110-9 95-7 87-4 95-0 Capital Employed Shareholders' funds 777-7 780-4 721-3 760-5 821-6 Minority interests 107-8 87-2 95-2 102-9 102-7 Deferred taxation 3-5 5-2 8-8 9-3 16-4 Payments received on account 100-8 68-0 53-0 45-4 33-0 Net borrowings/(funds)* 76-4 (98-2) (45-9) (46-4) (156-3) 1,066-2 842-6 832-4 871-7 817-4 Represented by: Fixed assets Net current assets (including provisions and other long term liabilities) 456-5 335-1 357-8 352-2 286-4 1,066-2 842-6 832-4 871-7 817-4 Statistics Return on capital employed Return on sales (excluding related) 8-296 9-1% 8-496 8-196 8-196 8-296 44-5p 44-5p 44-3p 48-1p	Profit before taxation	202-1	183.7	163.2	152-1	160-3
Hawker Siddeley	Taxation and minority interests	78.5	72.8	67.5	64.7	65.3
Capital Employed Shareholders' funds 777-7 780-4 721-3 760-5 821-6 Minority interests 107-8 87-2 95-2 102-9 102-7 Deferred taxation 3-5 5-2 8-8 9-3 16-4 Payments received on account 100-8 68-0 53-0 45-4 33-0 Net borrowings/(funds)* 76-4 (98-2) (45-9) (46-4) (156-3) 1,066-2 842-6 832-4 871-7 817-4 Represented by: Fixed assets 609-7 507-5 474-6 519-5 531-0 Net current assets (including provisions and other long term liabilities) 456-5 335-1 357-8 352-2 286-4 1,066-2 842-6 832-4 871-7 817-4 Statistics Return on capital employed Return on sales (excluding related) 8-2% 9-1% 8-4% 8-1% 8-9% 8-9% Earnings per ordinary share 62-5p 56-2p 48-5p 44-3p 48-1p	Profit attributable to	122.6	110.0	05.7	87.1	95.0
Shareholders' funds 777.7 780.4 721.3 760.5 821.6 Minority interests 107.8 87.2 95.2 102.9 102.7 Deferred taxation 3.5 5.2 8.8 9.3 16.4 Payments received on account 100.8 68.0 53.0 45.4 33.0 Net borrowings/(funds)* 76.4 (98.2) (45.9) (46.4) (156.3) 1,066.2 842.6 832.4 871.7 817.4 Represented by: Fixed assets 609.7 507.5 474.6 519.5 531.0 Net current assets (including provisions and other long term liabilities) 456.5 335.1 357.8 352.2 286.4 1,066.2 842.6 832.4 871.7 817.4 Statistics Return on capital employed 18.6% 21.8% 19.5% 16.6% 18.3% Return on sales (excluding related) 8.2% 9.1% 8.4% 8.1% 8.9% Earnings per ordinary sha	Trawker Studency					
Minority interests Deferred taxation 3.5 5.2 8.8 9.3 16.4 Payments received on account Net borrowings/(funds)* 1,066.2 Represented by: Fixed assets Net current assets (including provisions and other long term liabilities) 456.5 1,066.2 842.6 832.4 871.7 817.4 Represented by: Fixed assets 609.7 507.5 474.6 519.5 531.0 1,066.2 842.6 832.4 871.7 817.4 Statistics Return on capital employed Return on sales (excluding related) Return on sales (excluding related) Earnings per ordinary share 62.5p 56.2p 48.5p 44.69 48.10 48.90 48.10 48.10 48.10	Capital Employed	777.7	780.1	791.3	760.5	891.6
Deferred taxation						
Payments received on account Net borrowings/(funds)* 76.4 (98.2) (45.9) (46.4) (156.3) 1,066.2 842.6 832.4 871.7 817.4 Represented by: Fixed assets 609.7 507.5 474.6 519.5 531.0 Net current assets (including provisions and other long term liabilities) 456.5 335.1 357.8 352.2 286.4 1,066.2 842.6 832.4 871.7 817.4 Statistics Return on capital employed 18.6% 21.8% 19.5% 16.6% 18.3% Return on sales (excluding related) 8.2% 9.1% 8.4% 8.1% 8.9% Earnings per ordinary share 56.2p 48.5p 44.3p 48.1p	•					
Net borrowings/(funds)* 76-4 (98·2) (45·9) (46·4) (156·3) 1,066·2 842·6 832·4 871·7 817·4 Represented by: Fixed assets 609·7 507·5 474·6 519·5 531·0 Net current assets (including provisions and other long term (liabilities) 456·5 335·1 357·8 352·2 286·4 1,066·2 842·6 832·4 871·7 817·4 Statistics Return on capital employed 18·6% 21·8% 19·5% 16·6% 18·3% Return on sales (excluding related) 8·2% 9·1% 8·4% 8·1% 8·9% Earnings per ordinary share 56·2p 48·5p 44·3p 48·1p						
Represented by: Fixed assets 609.7 507.5 474.6 519.5 531.0	Net borrowings/(funds)*					
Fixed assets 609.7 507.5 474.6 519.5 531.0 Net current assets (including provisions and other long term liabilities) 456.5 335.1 357.8 352.2 286.4 1,066.2 842.6 832.4 871.7 817.4 Statistics Return on capital employed 18.6% 21.8% 19.5% 16.6% 18.3% Return on sales (excluding related) 8.2% 9.1% 8.4% 8.1% 8.9% Earnings per ordinary share 62.5p 56.2p 48.5p 44.3p 48.1p	A	1,066-2	842.6	832.4	871.7	817.4
Net current assets (including provisions and other long term liabilities) 456-5 335-1 357-8 352-2 286-4 1,066-2 842-6 832-4 871-7 817-4 Statistics Return on capital employed 18-6% Return on sales (excluding related) 8-2% 9-1% 8-4% 8-1% 8-9% Earnings per ordinary share 62-5p 56-2p 48-5p 44-3p 48-1p	Represented by:					
	Fixed assets	609.7	507.5	474.6	519.5	531.0
	Net current assets (including					
456.5 335.1 357.8 352.2 286.4 1,066.2 842.6 832.4 871.7 817.4 Statistics Return on capital employed 18.6% 21.8% 19.5% 16.6% 18.3% Return on sales (excluding related) 8.2% 9.1% 8.4% 8.1% 8.9% Earnings per ordinary share 62.5p 56.2p 48.5p 44.3p 48.1p	-					
Statistics Return on capital employed 18.6% 21.8% 19.5% 16.6% 18.3% Return on sales (excluding related) 8.2% 9.1% 8.4% 8.1% 8.9% Earnings per ordinary share 62.5p 56.2p 48.5p 44.3p 48.1p	liabilities)	456-5	335.1	357.8	$352 \cdot 2$	286.4
Return on capital employed 18.6% 21.8% 19.5% 16.6% 18.3% Return on sales (excluding related) 8.2% 9.1% 8.4% 8.1% 8.9% Earnings per ordinary share 62.5p $56.2p$ $48.5p$ $44.3p$ $48.1p$		1,066-2	842.6	832.4	871.7	817-4
Return on sales (excluding related) 8-2% 9-1% 8-4% 8-1% 8-9% Earnings per ordinary share 62-5p 56-2p 48-5p 44-3p 48-1p	Statistics					
Return on sales (excluding related) 8.2% 9.1% 8.4% 8.1% 8.9% Earnings per ordinary share $62.5p$ $56.2p$ $48.5p$ $44.3p$ $48.1p$	Return on capital employed	18.6%	21.8%	$19.50/_{0}$	16.6%	18.3%
Earnings per ordinary share 62.5p 56.2 p 48.5 p 44.3 p 48.1 p	Return on sales (excluding related)	8.2%	9.1%	$8 \cdot 1^{0/0}$	8.1%	8.9%
	Earnings per ordinary share	62·5p	56·2p	48·5p	44·3p	48·1p
	Dividend per ordinary share	25.0p	22·5p	19·0p	17·0p	14·5p

Notes

Following the merger of the Group's cable businesses with those of Delta plc, turnover and trading profit have been restated to treat the cable business as though it were a related company.

^{*} Net borrowings/(funds) comprise bank, cash and short term investments less debenture stocks. loans and overdrafts.

AND MAIN PRODUCTS

Electric Motors and Generators

Small Machines

Brook Crompton Ltd.
Small Industrial Motor Division Huddersfield and Honley: Small integral horsepower ac electric motors.

P. Howard Chairman

G. Oldrovd Managing Director

Fractional Motor Division Doncaster: Small power ac electric motors

P. Howard Chairman

R. Priestley Managing Director

Brook Crompton Controls Ltd. Wakefield: Motor starters, motor control systems, programmable controllers.

P. Howard Chairman

B. Holdsworth Director

Electromotors Ltd. Birmingham, Bradford and Newcastle-under-Lyme: Industrial and fractional horsepower electric motors.

F. Marley Chairman

G.S. Mackie Managing Director

Brook Crompton Betts Pty Ltd. Sydney. Australia (51-0%): Electric motors.

P. Howard Chairman

J.D. Lunn Managing Director

Fasco Motors Chesterfield, Ozark, Cassville, Eldon and Tipton, Missouri, USA: Fractional horsepower electric motors and custom blowers.

F.W. Mack Chairman

R.B. Karpen President

Fasco Consumer Products Fayetteville, North Carolina, USA: Consumer and commercial products.

F.W. Mack Chairman

D.G. Wilson President

Harowe Servo Controls West Chester. Pennsylvania. USA; and St. Kitts. WI: Subfractional horsepower electric motors and servo rotary components.

R.B. Karpen Chairman and President

Torin Ltd. Swindon: Custom blowers and fans for electronics cooling and heating, ventilating and air conditioning applications.

R.B. Karpen Chairman

P. Dobson Managing Director

Von Weise Gear Company St. Clair, Missouri, USA: Fractional horsepower gearmotors and gear reducers. R.B. Karpen *Chairman and President*

Elco Elettromeccanica Fratelli Colombo S.p.A. § Italy (49.0%): Small electric motors for refrigeration, ventilation and air conditioning.

Large Machines

Brook Crompton Ltd.
Large Industrial Motor Division Guiseley: Large integral horsepower ac electric motors.
P. Howard Chairman
J.R. Coldwell Managing Director

Large Machines continued

Brush Electrical Machines Ltd.
Industrial Division Loughborough: ac and dc motors and generators and associated control equipment for diesel and turbine drives.

R. P. Hampson Chairman

W.M.M. Petrie Managing Director

Hawker Siddeley Electric Africa (Pty) Ltd. Machines Division Germiston, South Africa: Electric motors, merchandising and servicing of electric motors and diesel engines.

R.P. Hampson Chairman

J.H. Annandale Managing Director

Crompton Greaves Ltd. § India (37-5%): Motors, transformers, switchgear, fusegear and lighting. Kirloskar Electric Co Ltd. § India (20-3%): Motors,

transformers, alternators and control gear.

Electrical Distribution and Controls

Engineering Contracting

Hawker Siddeley Power Engineering Ltd. Burton-on-the-Wolds, Subsidiary in USA: Project engineers for the design and construction of power generation and electrical transmission and distribution systems.

T.W.B. Sallitt Chairman

M.B. Page Managing Director

Switchgear

Hawker Fusegear Ltd. Burton-on-the-Wolds and Workington:

Industrial and semiconductor fuselinks and fusegear for high and low voltage systems.

T.W.B. Sallitt Chairman

R.E. Gibbons Managing Director

Brush Fuses Inc. Chicago. Illinois; Laurence Harbor, New Jersey, USA: Fuselinks and terminal blocks.

R.E. Gibbons Chairman

Brush Switchgear Ltd. Loughborough: Indoor and outdoor switchgear and medium voltage motor control gear.

R.P. Hampson Chairman

M.G. Simms Managing Director

South Wales Switchgear Ltd. Blackwood: Indoor and outdoor switchgear and medium voltage motor control gear. Line equipment.

R.P. Hampson Chairman

D.A. Whitaker Managing Director

Hawker Siddeley Electric Africa (Pty) Ltd. Switchgear Division Roodepoort, South Africa: Indoor and outdoor switchgear, motor control gear, overhead-line equipment, on-load tapchangers and turnkey projects.

R.P. Hampson Chairman

J.H. Annandale Managing Director

. CHIEF EXECUTIVES

AND MAIN PRODUCTS Continued

Electrical Distribution and Controls

cominued

Switchgear commuted

Hawker Siddeley Switchgear Pty Ltd. Sydney. Australia: Manufacturers and distributors of electrical switchgear and control gear. J.A. King Managang Director

Transformers

Brush Transformers Ltd. Loughborough: Distribution transformers, cast resin and air cooled transformers, flameproof transformers for hazardous conditions, transformers for rail power equipment. R.P. Hampson *Chairman*

M.F. Radcliffe Managing Director

South Wales Transformers Division Treforest: Distribution transformers for industrial and public utility supply.

R.P. Hampson Chairman

E. Owen Director and General Manager

Augier SA. Carros. France: Public lighting and airport lighting transformers and controls.

M.F. Radeliffe Chairman

G.G. Constans Managing Director

Hawker Siddeley Power Transformers Ltd. Walthamstow: Larger power transformers for generation and transmission. On-load tapchangers and off-circuit tap selectors.

R.P Hampson Chairman

T.D. Davies Managing Director

South Wales Electric (Pvt) Ltd.

Harare and Bulawayo, Zimbabwe: Transformers for transmission and distribution. High voltage switchgear. Merchandising and servicing of electric motors and diesel engines.

R.P. Hampson Chairman

J.P. Demblon Managing Director

Hawker Siddeley Electric Africa (Pty) Ltd. Transformers Division Wadeville, South Africa: Transformers for transmission and distribution and for specialised applications. Rectifiers and packaged sub-stations.

R.P. Hampson Chairman

I.H. Annandale Managing Director

Instruments and Controls

Hawker Instruments Inc. Witham, Japan, Singapore and USA: Electrical and electronic indicating and control instruments.

E. Tyson Chairman

P.E. Whybrow President

Hawker Instrumentation Supplies Ltd. Witham and subsidiaries in Australia, Europe, Far East and USA: Sales and distribution of instruments.

E. Tyson Chairman

K.A. Brooks Managing Director

instruments and Controls continued

Daytronic Corporation Dayton, Ohio, USA: Measurement and control instrumentation.

E. Tyson Chairman

D.S. Reeder President

Dranetz Technologies, Inc. Edison, New Jersey, USA: Precision electronic instrumentation products and power monitoring equipment.

E. Tyson Chairman

C.I.W. Baxter President

Fasco Controls Shelby, North Carolina, USA: Pressure and temperature controls.

J. Kennedy General Manager

Aerospace Avionics Inc. Bohemia, New York, USA: High technology electrical products primarily for aircraft applications.

D.L. Bennett Chairman

G.M. LaButti President

Clarostat Mfg Co. Inc. Dover, New Hampshire: Richmond and Norway, Maine; Glendale. California, USA: Electronic components for instrumentation, sound reproduction and recording equipment, telecommunications, aerospace, automotive, computer and automation applications.

D.L. Bennett Chairman

R.E. White President

Electro Corporation Sarasota, Florida, USA: Motion-presence- and position-sensing components and equipment for the industrial, automotive, military and aerospace markets, photo-electric scanners and bar code equipment.

D.L. Bennett Chairman

B.E. Goble President

Elmwood Sensors Inc. Rhode Is. USA: Commercial and precision thermostats, and allied consumer and commercial products.

D.L. Bennett Chairman

D.H. Schneider President

Elmwood Sensors Ltd. North Shields: Thermostats, temperature transmitters and PTC thermistors for consumer and commercial applications.

D.L. Bennett Chairman

P.J. Wilson Managing Director

OptoSwitch, Inc. McKinney, Texas, USA: Motion and position-sensing.

D.L. Bennett. Chairman

R.J. Crouse President

Sensym Inc. California, USA: High technology silicon-based pressure sensors, solid-state, integrated sensor systems and accelerometers.

D.L. Bennett Chairman

D.A. Dauenhauer President

Westinghouse Systems Ltd. Chippenham: Computer-based supervisory and automation control equipment. Materials handling equipment. Mine transportation control systems and equipment. Marine and industrial pneumatic control equipment. D.E.G. Stark Managing Director

Electrical Distribution and Controls

continued

Cables

Delta Crompton Holdings Ltd. §UK 36.0% e; Mains and general wiring cables.

Hawker Siddeley Electric Africa Pty: Ltd. Crompton Parkinson Division Johannesburg. South Africa: Merchandising of electrical products. R.P. Hampson *Chairman* R.G.H. Wiseman *General Manager*

Electrical Specialised Equipment

Batteries

Oldham Crompton Batteries Ltd. Denton, Manchester, and Newport, Gwent: Automotive, traction and mining batteries. W.J. Richardson *Chauman*

L.J. Drysdale Managing Director

Uniross Batteries Ltd. (704)% Nailsea, Bristol: Factoring of consumer battery-related products. W.J. Richardson *Chairman*

E.F. Upperton Managing Director

KW Battery Company Chicago, Illinois, USA: Traction batteries.

W.J. Richardson Chairman

M.J. Scrivener Exerutive Vice President

Oldham France S.A. Arras. France: Traction and standby power batteries. Gas detection equipment.

W.J. Richardson Chairman C. Dreulle Managing Director

Tungstone Batteries Ltd. Market Harborough: Automotive and standby power batteries.

W.J. Richardson Chairman

N.P. Dick Managing Director

Hawker Energy Products Ltd. Newport: Sealed lead-acid batteries for aircraft and high performance industrial applications.

W.J. Richardson Chairman I.C. Wells Managing Director

Crompton Eternacell Ltd. South Shields: Primary battery systems for industrial and military applications.

B.G. Shoosmith Chairman

P.J. Colien Managing Director

Power Conversion, Inc. New Jersey, USA and Puerto Rico: Lithium batteries.

B.G. Shoosmith Chairman

P.J. Cohen President

Rail Equipment

Brush Electrical Machines Ltd. Traction Division Loughborough: Diesel electric locomotives, rail traction power equipment and control gear.

R.P. Hampson Chairman W.M.M. Petrie Managing Director

Dimetronic S.A. (90-0%) Madrid, Spain: Railway signalling and automation systems and equipment.

H.R. Grant Chairman
J. Martinez Gomez Managing Director

Rail Equipment continued

Westinghouse Brake x Signal Ltd. Signal Division Chippenham: Railway signalling systems and equipment, train describers and automatic train control equipment.

H.R. Grant Chairman

J.R.C. Boulding Managing Director

Westinghouse Brake x Signal Co-Australia; Ltd. Signal Division (85-0%) Melbourne, Australia: Railway signalling systems and equipment. Security systems.

H.R. Grant Chairman

D.R.J. Allen Managing Director

Safetran Systems Corporation Minneapolis, Minnesota, USA: Railway signalling systems and equipment. Automatic level crossing systems. H.R. Grant *Chairman*

P.L. Wheeler President

Lighting and Other Activitles

Crompton Lighting Ltd. Doncaster, Guiseley and subsidiary in Australia: Tungsten filament, sodium, mercury and fluorescent luminaires and lamps.

B.G. Shoosmith Chairman

D.H. Owen Managing Director

Crompton Stud Welding Ltd. Market Harborough: Nuts, welded fasteners and stud welding equipment. W.J. Richardson *Chairman*

M.W. Mallen Managing Director

Westcode Semiconductors Ltd. Chippenham: High power semiconductor devices.

C.V. Miles Managing Director

Diesel Engineering

Small Engines

Lister-Petter Ltd. Dursley and Swindon, subsidiaries in USA and Australia: Medium and high speed diesel engines for industrial applications.

G. Howell Managing Director

Hawker Siddeley Power Plant Ltd. Thrupp: Diesel driven generating sets. Diesel engines for marine applications.

R.D. Brown Director and General Manager

Onan Corporation USA (36-0%): Generating sets, petrol and diesel engines.

Large Engines

Mirrlees Blackstone (Stamford) Ltd. Stamford: Medium-speed diesel and dual-fuel engines for industrial, traction and marine applications, diesel alternator sets for power stations, marine propulsion and auxiliary drives.

T.W.B. Sallitt Chairman H. Watson Managing Director

AND MAIN PRODUCTS Communical

Diesel Engineering continued

Large Engines continued

Mirrlees Blackstone Stockpurt: Ltd. Stockpurt: Larger medium-speed diesel and dual-fuel engines for industrial, traction and marine applications, diesel alternator sets for power stations, marine propulsion and auxiliary drives.

T.W.B. Sallitt Chairman H. Watson Managing Director

Mechanical Specialised Equipment

Raii Equipment

Westinghouse Brake x Signal Ltd. Brake Division Chippenham: Compressed air and vacuum braking systems for freight, main line and rapid transit vehicles. Air, vacuum or electrical control of these systems. Railway doors, door operating, air conditioning and communication systems.

H.R. Grant Chairman

J.R.C. Boulding Managing Director

Westinghouse Brake & Signal Co. (Australia) Ltd. Brake Division (85-0%) Sydney, Australia: Railway braking systems and equipment. Road braking equipment.

H.R. Grant Chairman

D.R.J. Allen Managing Director

Canadian Steel Wheel Division† Montreal, Canada: Wrought steel wheels for locomotives, freight and passenger railway cars.

M.J. Colman Vice-President

CGTX Inc.† (55-0% owned by Hawker Siddeley Canada Inc. Montreal, Canada: Leasing of railway tank cars and special freight cars. Operation of service depots.

R.D. Cole Chairman J.C. Léger President

Aerospace Equipment

HDA Forgings Ltd. Redditch and Smethwick: Forgings in aluminium alloys, titanium and special steels.

T.W.B. Sallitt Chairman

J.A. Halley Managing Director

Hawker Pacific Pty. Ltd. Sydney, Australia: Aviation sales and support, aviation spares distribution and aircraft engine overhaul.

C.M. Ryland Managing Director

Hawker de Havilland Ltd. (70:0%) Sydney, Melbourne and Perth, Australia: Aircraft production. Aircraft engine assembly. Aircraft component production. Aircraft modification, repair and overhaul.

J.B. Hattersley Managing Director

Standard Aero Ltd. Winnipeg. Vancouver and Montreal, Canada: Subsidiary in USA: Aircraft engine repair and overhaul.

R.C. Hamalierg President

Aerospace Equipment commued

Insumat Ltd. Gloucester: Thermal and acoustic insulation.

M.K. Bonehill Director and General Manager

Orenda Division[†] Toronto. Canada: Aircraft gas-turbine repair, overhaul and component manufacture, engineering laboratories and graphics services.

R.J. Munro Vice-President

Mining Equipment

Dosco Overseas Engineering Ltd.† Tuxford: Production and tunnelling machines for coal, and other mineral mining and civil engineeering. Dust suppression equipment.

R.D. Cole Chairman

A.D. Johnson Managing Director

The Dosco Corporation† Virginia, USA: Underground roadway roof supports. Sales and service of mining equipment.

R.D. Cole Chairman

J.E. Marianski President

Hollybank Engineering Co Ltd.† Tuxford: Underground roadway roof supports and mining contracting.

R.D. Cole Chairman

K.T. Sisson Managing Director

Hawker Noyes Pty. Ltd. Brisbane. Perth and Sydney. Australia: Mining and construction machinery, merchandising of engineering products. non-ferrous metals and plastics machinery.

K.E. Odbert Managing Director

Other Activities

Lister Shearing Equipment Ltd. Dursley: Sheep shearing equipment, horse and cattle clippers. G. Howell Chairman

P.J. Buttery Director and General Manager

Kockums CanCar Division† Surrey, Canada: Kockums CanCar Corp.† Atlanta, Georgia, USA: Sawmill and lumber processing equipment. W.C. Griffiths Vice-President

Sara Products Ltd. East Cowes: Extruded thermoplastic sheet and thermoformed packaging items.

W.J. Richardson Chairman

N.R. Finn Managing Director

Bunnings Ltd.§ Australia (24-2%): Sawmilling, timber and hardware merchandising, building contracting.

Holding Companies

Crompton Parkinson Ltd. Guiseley

Westinghouse Brake and Signal Holdings Etd. Chippenham

Hawker Siddeley Canada Inc. #Toronto, Canada

R.D. Cole Chief Executive Officer

Notes to pages 51 - 55

- I Unless otherwise stated the companies are incorporated in England and Hawker Siddeley Group PLC owns indirectly 100% of the issued share capital.
- 2 †Divisions or subsidiaries of Hawker Siddeley Canada Inc. ††Hawker Siddeley Canada Inc. (59.1% of common shares and 41.8% of preferred shares held).
- 3 § Denotes related company; particulars of share capital are shown below.

Related Companies

The following are particulars of the		
capital of related companies		Proportion held
Bunnings Ltd	Amount issued	by the Group %
Ordinary stock units	44.392.486 \$Aus	24-2
Crompton Greaves Ltd	44.032,400 JAus	24-2
Equity shares	96,000,000 Rupees	37.5
15% scened redeemable non-convertible debenures	200.000,000 Rupces	37·3
Deita Crompton Holdings Ltd	r	
Ordinary shares	87.983.000 £	36.0
Elco Elettromeccanica Fratelli Colombo SpA		
Equity shares	1,230,000,000 Lire	49.0
Kirloskar Electric Co Ltd		
Equity shares	66,996,430 Rupees	20.3
H ^a a redeemable cumulative (taxable) preference shares	2,500,000 Rupees	-
Lister Petter Diesels SA		
Common shares	2,726,050 Pesos	44.1
Onan Corporation		
Common stock	62.000 \$U S	36.0
Salister Diesels (Pty) Ltd		
Ordinary shares	1,428,571 Rand	35.0
Westinghouse Cubic Ltd		
Ordinary shares	200.000 €	50.0

Central Office Executives

Geoup Chief Accountant K.J. Chave, FCCA

Economic Appraisal R.D. Knou

International Sales

G.T. Checkens, CBE, BSc, CEng, MIEE

Group Central Services
J.A. Locke, DMS, MBCS

Group Treusurer

J. Hunze. FCA

Group Planning

R.B. McDaniel, MA, ACIS

The Annual General Meeting of Hawker Siddeley Group Public Limited Company will be held at the Inn On The Park, Hamilton Place, Park Lane, London W1, on Friday 11th May, 1990 at 12-00 noon, for the following purposes:

- 1 To receive and adopt the Directors' Report and Accounts for the year ended 31st December, 1989. (Resolution 1)
- 2 To declare a final dividend on the ordinary shares. (Resolution 2)
- 3 To re-elect Directors (Resolutions 3 to 6 inclusive). In this connection the Company has received special notice, pursuant to Sections 293(5) and 379 of the Companies Act 1985, of the intention to propose the following resolution as an ordinary resolution:
 - "That Sir Rowland Wright, who retires by rotation and who attained the age of 70 on 4th October, 1985 be and is hereby re-elected a Director of the Company."
- **4** To reappoint Price Waterhouse as Auditors of the Company and to authorise the Directors to fix the remuneration of the Auditors. (Resolutions 7 and 8).
- **5** To transact any other ordinary business of the Company.
- 6 As Special Business to consider and if thought fit pass the following Ordinary Resolutions:

"THAT the amendments to the Rules of The Hawker Siddeley Group Executive Share Option Scheme ("the Executive Scheme") and The Hawker Siddeley Group Overseas Executive Share Option Scheme ("the Overseas Scheme") summarised in the circular to the shareholders of the Company dated 17th April, 1990 which accompanied the notice of this meeting and which amendments are incorporated in the copies of the revised Rules of the Executive Scheme and of the Overseas Scheme which have been produced to this meeting and subscribed by the Chairman hereof for the purpose of identification be and they are hereby approved (subject in the case of the amendments to the Executive Scheme to the approval being obtained of the Board of Inland Revenue thereto) and the Directors be and they are hereby authorised to do all acts and things that they may consider necessary to obtain said approval or to carry the said amendments into effect." (Resolution 9).

"THAT in accordance with Rule 11(A) of the Rules of The Hawker Siddeley Group Savings Related Share Option Scheme this Meeting hereby amends the Rules thereof in the following respects:

- (a) In Rule 5 by the substitution of "80 per cent." for the reference to "90 per cent."; and
- (b) In Rule 8(C) by addition of the following at the end of the Rule "unless on the date of the allotment thereof dealings in Ordinary Shares on The International Stock Exchange of the United Kingdom and Republic of Ireland Limited are quoted at prices which include the entitlement to participate in the proposed dividend or distribution"." (Resolution 10).

By Order of the Board D.R. Gilbert, *Secretary* 18 St. James's Square, London SW1Y 4LJ 17th April, 1990

Note:

- Any member of the Company entitled to attend and vote at this Meeting is also entitled to appoint one or more proxies to attend and vote in his stead: a proxy need not be a member. A form of proxy is enclosed which, to be effective, must be deposited with the Company's Registrar not later than noon on 9th May, 1990.
- 2 Under the Company's Articles of Association only the holders of ordinary shares of the Company are entitled to attend and vote at this Meeting.
- 3 Copies of the Directors' service agreements with the Company and its subsidiaries and of the present Rules of The Hawker Siddeley Group Executive Share Option Scheme, The Hawker Siddeley Group Overseas Executive Share Option Scheme and The Hawker Siddeley Group Savings Related Share Option Scheme will be available for inspection during normal business hours at 18 St. James's Square, London SW1 from the date of this notice until the date of the Annual General Meeting and on 11th May, 1990 at the place of the Meeting from 11-45 a.m. until the conclusion of the Meeting.

HAWKER SIDDELEY

Annual Report & Accounts 1990

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HAWKER SIDDELEY IS DEDICATED TO SUSTAINED BUSINESS DEVELOPMENT THROUGH:

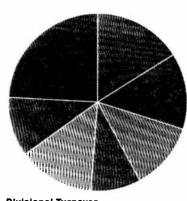
- MARKET LEADERSHIP IN ITS CHOSEN FIELDS OF ENGINEERING
- EXCELLENCE IN ITS OPERATING SYSTEMS
- QUALITY OF PRODUCT AND SERVICE
- RESPECT FOR THE ENVIRONMENT.

IN MEETING THESE GOALS, IT WILL BRING SECURITY AND SATISFACTION TO ITS INVESTORS, CUSTOMERS, EMPLOYEES AND THE COMMUNITY AT LARGE.

Financia Aighlights

Analysis by division

£million



Divisional Turnover (continuing businesses)

	Turr	Turnover		ling fit		ntal loyed
	1990	1989	1990	1989	1990	1989
Electric Motors	341	269	36.2	34.1	130	123
Electric Power	295	238	38.2	28.2	118	102
Instruments and Control	s 256	268	15.0	29.5	104	114
Batteries	189	164	14.3	14.6	79	71
Aerospace	297	269	22.0	18.4	120	137
Rail	224	181	13.6	19.2	100	68
General Engineering	509	512	37.7	61.6	386	409
Continuing Businesses	2,111	1,901	177.0	205.6	1,037	1,024
Discontinued Activities	67	245	(26.7)	(7.2)	38	39
	2,178	2,146	150.3	198.4	1,075	1,063

Geographical analysis by area of manufacture $\pounds million$

Geographical Turnover by area of manufacture (continuing businesses)

	Титючег			Trading Profit		Capital Employed	
	1990	1989	1990	1989	1990	198	
United Kingdom	941	804	81.5	85.2	473	392	
USA	478	481	27.7	51.1	195	233	
Australia	356	369	19.2	29.4	138	153	
Canada	167	101	27.4	18.8	166	18	
Other	169	146	21.2	21.1	65	65	
Continuing Businesses	2,111	1,901	177.0	205.6	1,037	1,024	
Discontinued Activities	67	245	(26.7)	(7.2)	38	39	
	2,178	2,146	150.3	198.4	1,075	1,063	

	1990 £ million	1989 £ million
Turnover		
Continuing Businesses	2,111	1,901
Discontinued Activities	67	245
	2,178	2,146
Group Trading Profit		
Continuing Businesses	177.0	205.6
Discontinued Activities	(26.7)	(7.2)
	150.3	198.4
Profit before taxation	140.4	202.1
Profit after taxation and minority interests	81.0	123.6
Earnings per share	40.8p	62.5p
Dividend per share		
Interim	10.0p	10.0p
Final	15.0р	15.0p
Cash flow from operating activities	150.3	121.3
Shareholders' funds	739.2	777.7
Net borrowings	133.9	76.4
Net gearing	18.1%	9.8%

Including the imputed tax credit, the equivalent total gross dividend paid or recommended for 1990 is 33.3p (1989: 33.3p).

Chairman s Statement



The year's results When I addressed the Annual General Meeting in May last year, I looked forward to further profit growth in 1990 with the support of a strong order position. During July it was necessary to announce that profit would fall short of the 1989 outcome, due to the identification of losses sustained in the Group's Power Contracting business in the UK and USA. In September, at the time of announcing the Interim 1990 Results, we reported that many of our businesses were experiencing erosion of margins due to the general downturn in world trading conditions and these conditions were expected to persist or deteriorate further during the remainder of the year.

The exceptional contracting loss of £26.7m, now reported at Hawker Siddeley Power Engineering is in the range anticipated in the July announcement, and, as expected, trading conditions continued to worsen through the second half of the year with the result that the Group profit before tax declined from £202 m. in 1989 to £140 m. in 1990. Year-on-year comparison at this level suffers not only from the HSPE losses but also from reduced property profits in 1990 (1989: £8m.).

The Group trading profit declined by 13.4% compared with 1989. The individual divisional results are detailed on page 2. Electric Motors, Electric Power Manufacturing, and Aerospace all showed an improvement in trading profit over 1989, and the Batteries division held steady. The Rail division trading profit declined by 29%, but the current orderbook is very strong. The Instruments and Controls division has been badly hit by the

general economic downturn, as have certain areas of General Engineering, where, for instance, the decline in construction activity has severely restricted the small diesel businesses, and the uncertainties in the mining and timber industries have affected equipment manufacturing levels.

Stringent measures to reduce costs have been necessary in the current economic climate – approximately 4,000 jobs have gone out of the system and 10 plants have been either closed or relocated.

Dividend In September 1990 the Directors declared an unchanged Interim dividend for the year ended 31 December 1990 of 10p per share. The Board is recommending an unchanged Final dividend of 15p per share, making a total dividend for 1990 of 25p per share, as in 1989.

The Group structure 1990 saw fundamental changes in the structure of the Group. A radically new divisional concept was introduced in April, whereby the individual manufacturing units operate in a co-ordinated control framework, with each division headed by a member of the Group Executive. At the same time, the central Group structure has been strengthened by the institution of units responsible for corporate planning, acquisition and disposal activities and human resource planning and development.

This was followed during the second half-year by a comprehensive strategic review. The Board recognised that the Group had too wide a range of diversified businesses, and the purpose of the review was to identify those with the greatest potential in the face of changes in the competitive structure of industry. This is dealt with more fully in the Chief Executive's Review.

Without exception, the new divisions faced increasing economic uncertainty as the year progressed. Consequently, the pace of acquisitions was slowed down in the second half-year, and many of our businesses had to concentrate upon the actions necessary to meet falling market demand. The larger acquisitions completed in 1989, Standard Aero and Electromotors, made an encouraging contribution to profits in their first full year in the Group.

After careful consideration, the Board has decided to withdraw in a controlled manner from the Electric Power Contracting business. The cost of withdrawal has been charged as an extraordinary item in the 1990 figures. It is the intention of the Board to ensure that all current contracts will be adequately resourced and completed to the satisfaction of our customers.

Financial position Expenditure on acquisitions amounted to £70m. in 1990 and the Group had additional capital spending, aimed mainly at increasing production efficiencies, of £92m. The Group's financial position remains strong with gearing at the year end representing 18% of shareholders' funds.

The level of cash generation from operations has greatly improved during 1990 as a result of a determined drive to raise operational efficiencies.

The extraordinary debit of £25m. largely reflects the cost of terminating the Power Contracting activity (£12m.) plus the tax settlement with the Inland Revenue, announced in September, relating to a subsidiary which had previously been considered resident overseas (£11m.).

People Mr. R. A. Willford, a director since 1981, and Mr. T. W. B. Sallitt, a director since 1977, retired from the Board during 1990. I wish to thank them both for their many years of service to the Group.

1990 was a tough year and this placed additional demands on many of our employees. On behalf of the Board, I should like to record our thanks to them all for their support in a difficult economic climate.

The future In the uncertain trading environment, which prevails in most parts of the world, it is difficult to predict the near-term performance of the Group, particularly in those manufacturing activities which have very short lead times. However, overall, the Group's orderbooks are generally healthy and our key divisions are performing creditably.

The actions that have been taken to reduce costs and improve manufacturing efficiencies, together with the organisational changes, both centrally and in the divisions, have strengthened the Group. We believe that we have correctly identified those areas of our business with the greatest potential, and that our aims for growth in the 1990's are attainable.

Chief Executive's Review



Highlights 1990 was a difficult year for manufacturing in general, and Hawker Siddeley was no exception. Assertive action has been taken to minimise the impact of the deteriorating economic situation by 10 factory closures, some relocation to lower cost areas and a reduction of more than 4,000 in the Group's workforce, as far as possible by natural wastage and early retirement.

Towards the end of the year the protracted negotiations for Corby and Peterborough power station construction contracts were successfully concluded, and a strong project team has been assembled to ensure the successful completion of

these attractive contracts. Because of the high degree of risk in Electric Power Contracting and the comparatively small amount of Group equipment in such projects, a decision was taken to withdraw from this business in a controlled manner.

Successes of the year were the good trading performances achieved by three of the Group's divisions. The manufacturing operations of the Electric Power division performed strongly and, although aided by acquisitions, the Electric Motors and Aerospace divisions also exceeded their 1989 trading profit. Despite the uncertainties of the economic environment, the Group's overall order intake exceeded the previous peak attained in 1989, when rail orders were strong. In 1990 major orders were secured in the Electric Power, Batteries, Rail and Aerospace divisions.

The Group continued to earn a substantial proportion of its profit overseas, 46% of the trading profit from continuing businesses being earned in the UK and 54% overseas. Exports from the UK rose by 25% to £323 million with a notable increase of 52% to £72 million to the Far East.

financial comments The Group's financial position remained strong with cash flow from operating activities increasing by 24% to £150 million. After expenditure of £70 million on acquisitions, including £40 million in the Electric Motors division, and capital spending of £92 million mainly in support of the drive for improved manufacturing efficiency, there was a net cash absorption of £97 million. Nonetheless, the Group's gearing at the year end represented a still modest 18% of shareholders' funds.

During the year the Group's freehold and long leasehold properties were revalued. The previous book values were increased by £44 million.

The Group Executive is determined to maintain the Group's strong financial position, with strategic acquisitions being largely financed from disposals.

Strategic development

The strategic development of the Group is being implemented in four phases; creation of a more focused structure and strengthening of the management, strategic analysis, reshaping of the portfolio and the development of the selected businesses.

The first phase was effected by reorganising the operating units into seven divisions and by strengthening the headquarters management team. New appointments included Mr. D. J. D. Lewis as Director - Strategic Planning, and Mr. E. P. Jones as Director - Human Resources. Dr. C. R. Burns also joined the Group Executive in September as head of the Aerospace division. The second phase was carried out during the second half of 1990 with a comprehensive strategic review. The process involved a clear definition of the Group's key businesses, evaluating their inherent attractiveness and assessing the prospects for each to attain a leadership position in its market. In the changing competitive environment it was adjudged that the Group could be best developed by concentrating on those businesses which present the opportunity to attain a leadership position.

The third and fourth phases, the reshaping of the Group and the development of the selected businesses with leadership potential, have started but will take time and the outcome of the strategy will unfold as transactions are announced. The first of these is the acquisition of Chloride's Industrial Batteries Division, which has been approved by Chloride Group shareholders and should be completed shortly.

Manufacturing efficiency

Considerable progress was made during 1990 towards adopting best practice manufacturing systems. Additional task forces were set up throughout the Group using a systematic approach to identifying and bringing into effect the best ways to achieve manufacturing competitiveness. A small centre for Manufacturing Technology was established at Group headquarters to co-ordinate and promote this initiative. An increasing focus and expenditure on research and development also played a part in ensuring that the Group's products meet customers' changing requirements.

Human resources The appointment of a Director – Human Resources, provided a stimulus to the commitment to training, which is targeted at improving the effectiveness of the Group's operations. Training programmes are in progress to attract, motivate, retain, develop and support key employees and generally to improve management performance.

The current year 1991 opened with the emphasis upon continuing cost reduction and plant closures to meet the prevailing recessionary trading conditions and to improve short term profitability. Looking ahead, the steps which were taken in 1990 to create a clear vision for the future, to provide more purposeful strategic direction and to improve manufacturing efficiency and management performance should begin to bear fruit as soon as the trading environment allows.

The Review of Operations, which starts on page 8, reports on 1990 division by division.

Alan K Watkins

Managing Director and Chief Executive
21st March 1991

Review o. Jperations

This is Hawker Siddeley

Electric Motors Division

The division manufactures over 30 million motors every year, with production facilities in the UK, USA, Canada, Australia, Italy and India. They range from fractional horsepower to large integral motors, with applications ranging from delicate medical instruments to giant mining conveyor belts.

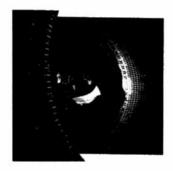




Electric Power Division

This division supplies major power companies around the world with equipment and services for generation, transmission and distribution of electricity. Major interests include switchgear, transformers and both diesel and turbine-driven generators.





Instruments and Controls Division

This is a strong network of companies producing instruments, sensors and controls in both the UK and USA. Products range from electrical indicating systems to sensors monitoring everything from vehicle road speed to temperatures on the space shuttle.



Turnover by Division







Batteries Division

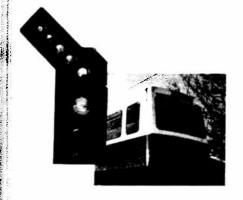
The division is a leader in both primary and secondary industrial batteries manufacturing in Europe and the USA. The division supplies traction and starter batteries for vehicles as well as batteries for standby applications in computing, telecommunications and power.





Aerospace Division

The Group's aerospace interests include aero-engine overhaul and repair facilities throughout North America and the Pacific Rim as well as collaborative aircraft design and construction. The division also manufactures aero-engine and airframe components in Australia and the UK.





Rail Division

The rail division supplies railway and rolling stock manufacturers worldwide. Capabilities include the manufacture of complete mainline and freight locomotives, propulsion units, brakes, doors and air-conditioning. The division also supplies signalling, ticketing and traffic control systems.





Turnover by Division

General Engineering Division

The diverse operations of this division are mainly in the UK, Australia and Canada. They include the production of small diesel engines, lighting manufacture and a range of mining activities, including roof supports and tunnelling machines and the service of mining machines.

ELECTRIC MOTORS DIVISION

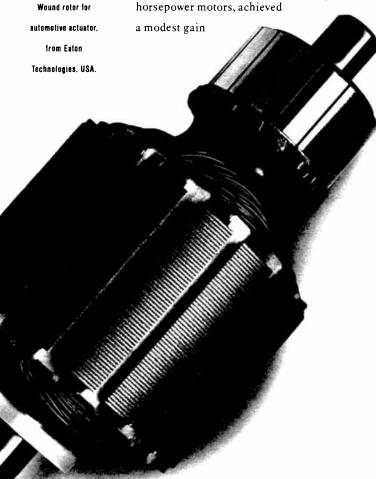


Philip Howard Group Executive, Electric Motors

The Electric Motors division had another active year with additional strategic acquisitions. The plants of the acquired companies and of Electromotors, acquired late in 1989, were successfully integrated into the division and contributed to the 6% rise in the division's trading profit of £36.2 million during the year. Although electric motors could not avoid the secondhalf downturn in trading conditions in the UK, the USA and Australia, growth is expected to be restored as soon as the general economic background improves. ☐ In the UK, Brook Crompton successfully carried out management restructuring and some factory rationalisation to assimilate the recently acquired companies, Electromotors in December 1989, and Bull Electric in April 1990. Changes in manufacturing systems at

Electromotors' Blackheath plant enabled substantial stock reduction and a faster service to customers. Brook Crompton is the leading UK producer of AC electric motors, covering a broad range of outputs. Medium and large sized motors did well and, although market conditions became increasingly competitive, the supply of motors to North Sea oil and other petrochemical projects remained buoyant. Export efforts were rewarded with advances in Germany, France and Scandinavia. New products with advanced specifications were introduced for use in air conditioning and smoke extraction applications. Through its acquisitions, the division has also become the leading UK manufacturer of DC motors, with a useful share of the US market for high rise lift motors.

☐ In the USA, Fasco Industries' motor plants, which concentrate on fractional horsepower motors, achieved



in profit in spite of deteriorating trading conditions, especially in consumer-led markets. The centrifugal blower business showed strong growth as new applications were successfully introduced. Resources were focused on moving towards "world class manufacturing" and "total quality" through advanced manufacturing programmes with full employee involvement. Where necessary, products are being redesigned to facilitate automation and cost reduction. The Electrohome and Eaton Technologies' acquisitions, in February and May respectively, were integrated into the division, Electrohome bringing in a motor plant in Canada and Eaton an entry into the North American automotive DC motor market, with particular emphasis on seat mechanisms. ☐ In Australia, Brook Crompton Betts is now wholly owned, the 49% minority shareholding having been purchased in September. In the face of falling demand, changes were made to reduce costs and improve productivity. Ongoing product development will assist the business in maintaining its position as the leading Australian electric motor manufacturer. ☐ The associated companies, Elco in Italy, 49% owned, and Crompton Greaves in India, 37.5% owned, had a mixed experience. Elco, which manufactures small motors and fan units for refrigeration and air conditioning applications, over half being exported, faced more severe trading conditions. On the other hand, Crompton Greaves, which produces a wider range of electrical products, increased its profit with major contributions from the power and general industrial sectors.

ELECTRIC POWER DIVISION



Bob Hampson Group Executive, Electric Power

The Electric Power Manufacturing operations achieved a 35% increase in trading profit to £38.2 million during 1990. 1991 is expected to be another good year for the division's operations.

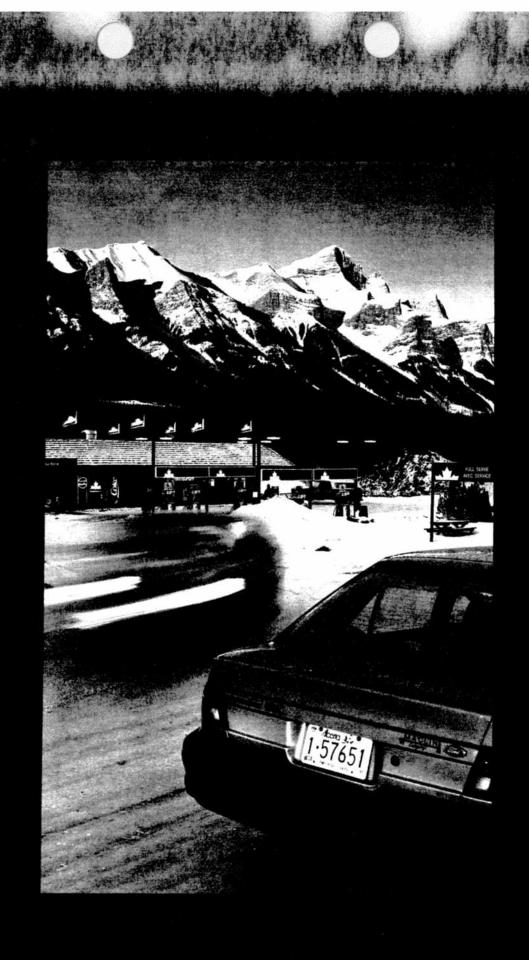
☐ The Industrial and Industrial Controls sections of Brush Electrical Machines made substantial progress. New power generation projects created good opportunities for turbo-generators, including the largest air cooled turbo-generator ever ordered from Brush. The Industrial Controls business was relocated from the main Loughborough site to a new factory two miles away. A complete range of inverters was successfully developed and a large order was obtained from Ford of America for a rolling road test installation.

☐ The switchgear and transformer businesses had a good year with overseas sales and exports making a sizeable contribution.

The UK companies placed a strong focus

The pumps at a Petro-Canada service station in Alberta incorporate products from both Hawker Siddeley's Electric Motors and Instruments and Controls divisions. ■ Motors from Brook Crompton are supplied to one of the world's largest fuel pump manufacturers. Special transparent flexible heaters from Elmwood Sensors' range enable the LCD readout on the pumps to operate during extreme winter temperatures.

Electric motors power air compressors, hydraulic car lifts, extractor fans and other equipment in the service station. Smaller motors are used in the office machines, refrigerators and air conditioners. The Group supplies electric motors for every branch of industry and commerce in every continent on earth. ■ Components are also supplied for the US automotive industry by Instruments and Controls operations including Elmwood Sensors and Fasco Controls. A variety of switches, actuators and sensors are built into vehicles from all the major US manufacturers. Sensing, measuring, indicating and controlling products from the division are operating in applications from coal mining to aerospace.



on new export customers with notable successes in Bangladesh, France, Hong Kong, Indonesia, Japan and Singapore. Reorganisation of manufacturing and new product development with emphasis on value engineered designs were key aspects in the success of these businesses. Brush Transformers, in particular, made considerable investment in fabrication and core steel cutting machinery and computer aided design equipment. In its first full year in the Group, Augier, in the south of France, also invested in computer aided design and substantially increased its productivity and profitability. In Australia, where the economy has moved into recession, Hawker Siddeley Switchgear improved its performance. The units in Africa, where switchgear and transformers are manufactured for domestic markets, continued to strengthen their market positions.

□ The Mirrlees Blackstone diesel engine businesses had an excellent year, boosted by the manufacture of MB275 engines for British Rail's Class 60 freight locomotives. The completion of orders for large generating sets for China and for engines for Sizewell power station enabled the Stockport factory to operate at full capacity. The Stamford factory returned to profitability with the higher power EV engine increasing its proportion of output. The marketing and support companies in Canada, Australia, Singapore and the USA continued to provide back-up for the UK manufacturing companies.

INSTRUMENTS & CONTROLS DIVISION



Frank Mack Group Executive, Instruments and Controls

Facing a difficult industrial background which created surplus capacity, the Instruments and Controls division did not live up to the Group's expectations for 1990. With a sharp setback in the second half-year, the trading profit of the new division of £15.0 million was 49% lower than the combined profits of the equivalent companies in 1989.

The USA market, which accounts for three-quarters of the division's sales, was tough for products supplied to customers in the automotive, defence and electronics industries. In these circumstances, the Sensors and Controls businesses closed two factories and made a significant reduction in the workforce. However, Elmwood Sensors had another good year, and development took place wherever growth opportunities could be identified. Fasco Controls developed a pulse width modulating ("PWM") solenoid for automotive anti-lock braking systems, which are expected to become a feature of





every US vehicle by the year 2000. In the fast growing automatic identification market, LazerData is concentrating on systems for the distribution sector. Sensors and Controls also established a European Sales and Engineering Centre in northern Germany to penetrate the medical, automotive and industrial markets of Europe with products previously sold primarily in the USA.

The Instrument businesses, Hawker

Instruments, Daytronic and Dranetz Technologies, also operate predominantly in the USA. With flat market conditions, organisational, product and manufacturing changes were implemented to enable the companies to reach world competitive standards of quality, service and cost. Daytronic, whose products include high speed data acquisition systems, analogue and digital instrumentation and digital process controllers, increased its sales and profitability. The improved performance was partly due to the success of the new 4000 Instrument Series. Dranetz Technologies responded to falling demand by cutting payroll and other expenses and launching product redesigns. Manufacturing was upgraded towards world class by establishing manufacturing cells and introducing a quality awareness training programme.

Westinghouse Systems, a leading international supplier of energy control centres, made significant dispatches to Africa, Australia, the Caribbean, Denmark and Malaysia as well as handing over systems installed in China, Saudi Arabia and Spain.

The fusegear business suffered from a loss

in the USA, where a thorough review of Brush Fuses resulted in manufacturing being transferred from Illinois to a new low cost facility in Mexico. In the UK, Hawker Fusegear's business was augmented by the acquisition of the contactor business of Enbray Controls in July. The emphasis on new product development was rewarded at the National Exhibition Centre when the Camaster fuseholder received the Technical Excellence Award at Electrex 90. Westcode Semiconductors had a record year for sales and profits. Export sales of its high power semiconductor products were strong, with continued penetration of international industrial and capital equipment markets.

Elmwood Sensors Ltd.
England, manulactures
ceramic solid-state
heaters, used in VW
Audi cars for efficient
luel combustion.



A Class 60 diesel freight locomotive built by Brush Traction passes a South Wales Switchgear trackside substation on the UK rail network.

The Class 60, the most powerful locomotive of its kind ever built, is now entering service with British Rail, replacing its entire heavy-haulage fleet. Brush Traction equipment also powers electric trains using this main line to one of London's busiest rail terminals. Rail division companies supply products and equipment from sliding doors and air conditioning to complete locomotives, and the most modern braking systems for all types of light urban and main line rail vehicles.

Through its Westinghouse subsidiary, the division is also a world leader in solid-state signalling equipment, and supplies passenger information, ticketing and revenue control equipment worldwide.

Part of the Group's Electric Power division, South Wales Switchgear manufactures weatherproof trackside substations to control and protect railway power supplies. From massive diesel or turbine-driven power plant, through switchgear and transformers, electrical energy is generated, dispatched and distributed through products, systems and equipment from the division's companies.



BATTERIES DIVISION



John Richardson Group Executive, Batteries



The Batteries division did not achieve the profit growth that was expected in 1990, with profit falling in the second half-year. The 2% decline in trading profit to £14.3 million in the full year was caused by unforeseen losses in the USA which masked the sound progress of the European companies. Following a detailed strategic assessment, it was concluded that the division is well positioned in the European battery industry with prospects for profitable growth. The acquisition of Chloride's industrial batteries business will further enhance the outlook. ☐ With factories in the UK and France, Oldham Crompton Batteries, Tungstone

industry, increased its capacity and supplied products to Continental Europe, North America, Japan and Australasia. In nickel-cadmium batteries and chargers, Uniross Batteries, 70% owned, is the UK's leading supplier. The company added to its product range and strengthened its position with mail order and retail customers. In the USA it was a poor year for KW Battery Company, which serves the motive power battery market. However, through the introduction of new products, the company is building a differentiated package for its customers and has won some important new contracts. A small battery business in Chattanooga, Tennessee, now trading as PowerSource, was acquired in March to serve the cost conscious segment of the market. Power Conversion, manufacturers of lithium batteries in New Jersey and Puerto Rico, operated below capacity for most of the year. However, in September, the company was awarded a major contract to supply the US Army with lithium sulphur dioxide batteries to power night vision and communication equipment and chemical monitoring devices. Product development concentrated on industrial applications, including a lithium manganese dioxide memory back up product and a new range of lithium thionyl chloride cells. Crompton Eternacell, the UK lithium battery business, focused on overseas defence markets as well as industrial application niches in Europe. Good progress was achieved, and significant contracts were won both in the defence field and in memory back up for security and home heating systems.

AEROSPACE DIVISION



Christopher Burns Group Executive, Aerospace

With benefit from a full year's contribution from Standard Aero, the Aerospace division achieved its anticipated trading improvement. Trading profit increased by 20% to £22.0 million. As a consequence of strategic assessment the Aerospace division will continue to develop its international presence in aero-engine repair and overhaul and to strengthen its regional and national positions in aerospace distribution, manufacture and assembly.

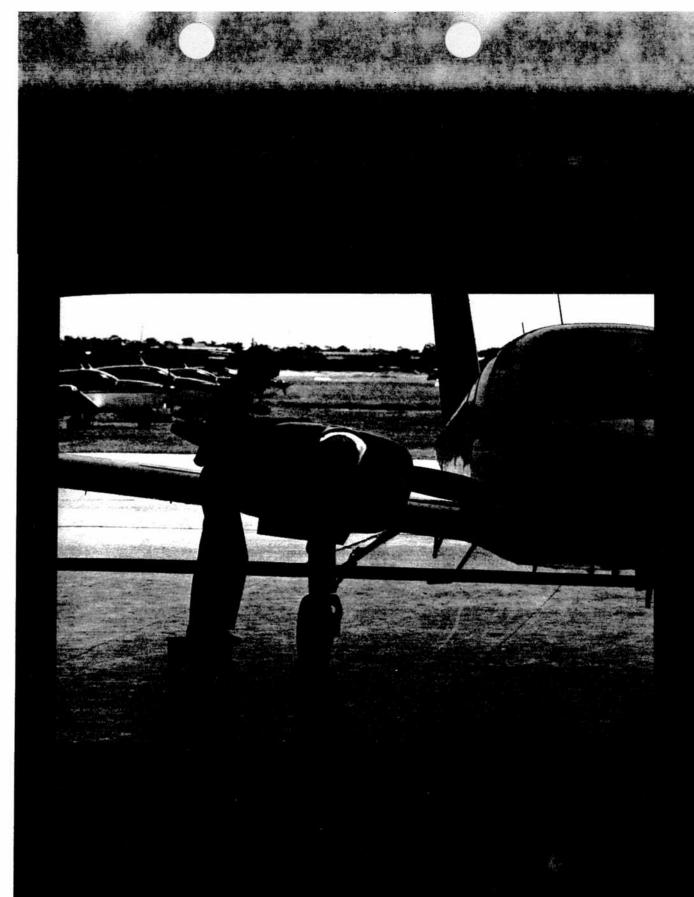
□ Standard Aero, the aero-engine repair and overhaul business based in Winnipeg, acquired in October 1989, had a good first year in the Group, increasing market penetration both in North America and elsewhere. Important new business was won, including renewal of Canadian military contracts totalling C\$125 million over three years. The division's position in engine overhaul was strengthened by an agreement with Pratt & Whitney, Canada, authorising

Routine engine maintenance on a twin-engined Beechcraft trainer operated by Hawker de Havilland's Australian Aviation College at Parafield Airport, Adelaide.

Based mainly in Australia and North America, Hawker Siddeley's Aerospace division's capabilities extend from airframe and aero engine construction for the world's leading aircraft companies, to the manufacture of individual components.

Every wide-body airliner flying today has major mechanical components from Group companies and the division is actively involved in supplying the new generation of civil aircraft under development. Specialist companies within the Group provide products and services for the civil aviation industry. These range from airline pilot training by Hawker de Havilland, to ultra long-life lithium batteries from Crompton Eternacell which protect memory circuits in avionics systems; from Hawker Energy Products' aircraft batteries for the Royal Air Force 'Red Arrows' display team, to engine maintenance and overhaul by Standard Aero.

Hawker Siddeley's capabilities extend into the space industry, with every satellite launched by Western countries equipped with sensors from Elmwood, and all Ariane launch vehicles provided with thermal insulation from Insumat.



Standard Aero to overhaul the PT6 engine, the most popular turboprop engine in the world. Further investment will ensure that best practice standards of performance are achieved throughout its operations. □ In Australia, Hawker de Havilland, 70% owned, maintained the previous year's record sales with improved profitability. Servicing operations were affected by lower economic activity, but exports of civil airframe fabrications to Boeing, Airbus and McDonnell Douglas continued to grow. Important new contracts were obtained for parts for the 737, 757, A320 and MD80 aircraft. Work continued on the body of the MDX helicopter, which is being developed in collaboration with McDonnell Douglas Helicopters, with design and tooling well advanced. Assembly of Black Hawk helicopters and Pilatus turboprop trainers for the Australian armed forces proceeded on schedule. Other work for the Royal Australian Air Force included a contract to install, jointly with Rockwell, an avionics update

Standard Aero.

Canada, overhauls

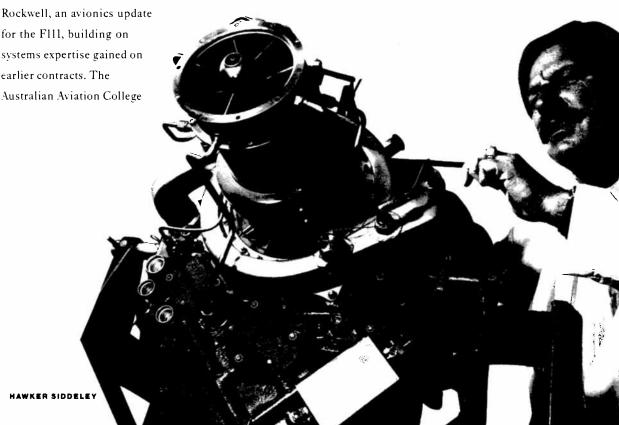
Allison 250 engines
for the Los Angeles

Police Department's

helicopters.

in Adelaide developed according to plan and now has 100 trainees from six airlines. Hawker Pacific bore the effects of the downturn in general aviation in Australia as well as the consequential effects of the Gulf crisis on helicopter sales through its Bahrain office. These were offset to some extent by good aircraft sales in Indonesia and the Philippines, together with further Airbus deliveries in Australia and Papua New Guinea. The landing gear and hydraulic overhaul business in the USA had a setback and concentrated its business in California.

☐ In the UK, the HDA Forgings' blade and general forgings business had a good year. The progressive reorganisation of the blade forge at Redditch into manufacturing cells should ensure significant productivity gains. Insumat, the fabrication and insulation business, continued to grow and is making progress in terms of market share and manufacturing efficiency.





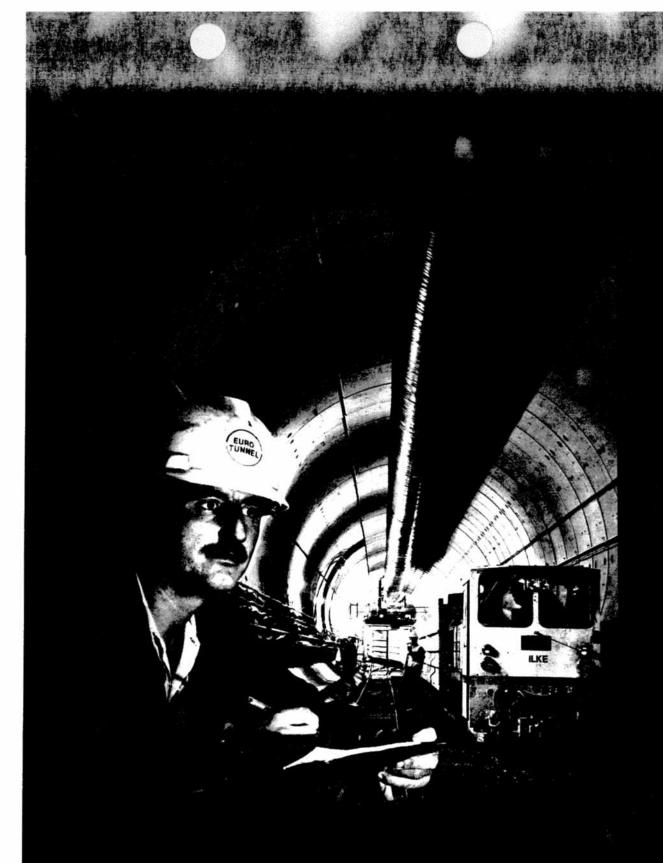
Activity in the railway industry increased worldwide and the newly formed Rail division participated in this growth and ended the year with a strong orderbook, which bodes well for 1991. Higher sales in 1990 were not reflected in trading profit which fell by 29% to £13.6 million. There was a sharp drop in profit in the second half-year, largely because of a deficit in the traction business.

Thost of the division's profit was made in signalling. Safetran achieved a record performance, with particular success in its rail/highway grade crossing business due to the successful introduction of new microprocessor-based crossing control equipment. A strong commitment to innovative products and ongoing implementation of efficiency programmes should keep Safetran in the forefront of the North American signalling industry. Dimetronic maintained its consistent growth and, arising from the joint

development programme among all Group signalling companies, completed in Spain the first installation of a new electronic interlocking using the latest technology. New automatic train operation equipment generated orders from Barcelona Metro, Catalunya Railways and Madrid Metro, whilst orders for the new Valencia Metro and for upgrading Spanish surburban services give Dimetronic a record orderbook. The signal business of Westinghouse Brake and Signal in the UK was awarded with contracts for major resignalling schemes for British Rail and London Underground using the latest solid state technology. Export orders included signalling equipment for the Beijing Metro.

- ☐ The brakes business of Westinghouse
 Brake and Signal, which embraces door
 equipment, air conditioning, train management and communication systems as well as
 brakes, improved its profit and established
 a leadership position with significant
 orders from both UK and international
 customers, including the Beijing Metro.
- □ Westinghouse Brake & Signal Company (Australia), 85% owned, had a good year with its railway related business, introducing a number of advances in railway technology, including new microprocessor-based safety equipment and an Australian designed point machine. However, the downturn in the Australian economy had an adverse impact upon the security products and fluid power activities. New product development for these segments should enable the company to take full advantage of any improvement in the economy.
- ☐ Traction, the third of the Rail division's main businesses, fell short of expectations

The largest civil engineering undertaking of its kind in the world, the Channel Tunnel will provide a fixed rail link for trains hauled by Brush electric locomotives, between the UK and Continental Europe. ■ Hawker Siddeley companies are continuing to provide products, equipment and services for the Channel Tunnel project. Products from the Electric Motors division drive a vast range of machinery and equipment from the giant boring machines, emergency pumps, blowers, conveyors, fixed and portable pumping equipment, to air conditioners and office machines in the project's surface installations. Electric power for equipment above and below ground is controlled, distributed, protected and monitored by switchgear, transformers, fusegear and instrumentation from Group companies. Back-up battery power for switchgear and telecommunications systems, and power to drive electric locomotives hauling men and equipment on both sides of the Channel, is supplied by Oldham Crompton and Oldham France. Roof supports, sliding shuttering systems, lighting equipment, cables, stud welding equipment and diesel engines are provided by General Engineering division companies.



through delays in commissioning the new British Rail freight locomotives. Most of the difficulties, which arose from the short lead-time from order to delivery, have now been resolved by improved project management. Early in 1991 the traction activity was transferred from Brush Electrical Machines to a new company, Brush Traction, and manufacturing and office facilities are being extended to maximise the profit opportunities from the strong orderbook.

□ Westinghouse Cubic, 50% owned, continued to broaden the scope of its business beyond the installation and maintenance of ticketing machines for the London Underground with major new work for Docklands Light Railway and the Strathclyde network around Glasgow.

Westinghouse Signals designed and supplied the signatting system on the Singapore Mass Rapid Transit system.

in significant orders for additional rail cars, which will come into service in 1991. Orenda caught up with its backlog of unfilled orders for aerospace repair and overhaul work, and new orders, particularly for aero-engine components, increased appreciably, 1990 opened with the purchase of Middleton Aerospace in Massachusetts and Windsor Aerospace in Ontario, Their precision machining capabilities and ability to produce high quality parts and complex landing gear components enhance Orenda's existing capacity. Both of the new units made a useful profit. Kockums CanCar, which manufactures timber processing machinery in Canada and the USA, made a small profit. The business was restructured in the face of declining

> sales in North America, but it will benefit from continuing demand for spare parts and stronger demand in export markets. It was a difficult year for Canadian Steel Wheel. With lower demand for forged railway wheels in

1111111111

Canada, efforts were successfully directed towards reducing production costs. Hawker Siddeley Canada's UK subsidiaries, Dosco Overseas Engineering and Hollybank Engineering, had mixed results. Hollybank, producers of mine roof arch supports, had a good year, but Dosco faced lower demand for new mining machinery from British Coal and from export markets. A recent increase in export contracts and reduced operating costs have improved the trading environment.

☐ Lister-Petter, the diesel engine producer, encountered difficult trading, particularly in the UK construction equipment market, and recorded a loss. However, the launch

GENERAL ENGINEERING DIVISION

The General Engineering division contains those businesses which do not fit in closely with the operations of the other divisions. It was a difficult year for some of these operations, with market conditions deteriorating as the year progressed, and the trading profit of the companies in this division fell by 39% to £37.7 million. ☐ Hawker Siddeley Canada, 59% owned, is the largest constituent of this division. An improvement in its profit was largely due to another good year for CGTX, its 55% owned rail car leasing business, and to a return to profitable operation at Orenda. Leasing activity was buoyant for CGTX throughout the year and fleet utilisation

was high. New lease commitments resulted

was completed of the full Alpha engine range, air and water cooled, and new distribution networks were established in the major European Community markets. Small profit improvements were made at Hawker Siddeley Power Plant and Lister Shearing Equipment.

The downturn in construction also affected Crompton Lighting. However, a major initiative was taken to improve manufacturing performance and, following a thorough analysis of its customer needs, new sales and marketing initiatives have been targeted. Crompton Stud Welding, the specialised fastener manufacturer, continued to develop new products for niche markets. New capacity and computer control of all its major machines augur well for 1991.

☐ Hawker Noyes, the Australian distributor of construction and mining equipment, was affected by the recession in Australia and profit fell sharply. Nonetheless, the company took advantage of the expansion in opencast coal mining to become the leading supplier of off-road haulage equipment. Changes in the structure of the company are being accelerated in order to position the business for the next upturn in the eyele.

□ Delta Crompton Cables, 36% owned, maintained its profit despite facing softening demand and some disruption of its operations caused by the ongoing reorganisation of the business. Completion of this reorganisation early in 1991 should place the business in a stronger position for the future. Bunnings, 24.6% owned, whose core businesses are the production

and distribution of timber and the retailing of hardware, was also affected by the recession in Australia. Consequently, profit was reduced and a major restructure was embarked upon to lift the performance of the company pending the next upturn in the home building industry. The profit of Onan Corporation, the 36% owned manufacturer of generating sets, was set back by lower activity in the North American recreational vehicle market. This, together with shortfalls in US activity generally, more than offset another good performance by Onan's subsidiary, Newage Engineers, the UK alternator

manufacturer.

Inspection of profile

precision-machined bearing.

and roundness on a



Board of cirectors

Quinton Hazell

Sir Lindsay Alexander



Sir James Hamilton

Sir Rowland Wright

Chairman

Sir Peter Baxendell CBE

Appointed to the Board, August 1984: Chairman, May 1986; previously Chairman and Managing Director of Shell Transport and Trading; currently a Director of Shell, also of Inchcape.

Managing Director and Chief Executive

Dr Alan K. Watkins BSc PhD FIM FIMIGE CEng Appointed to the Board, May 1989; Managing Director and Chief Executive, July 1989.

David G. Bury FCA

Finance Director. Appointed to the Board, March 1986.

Sir Lindsay Alexander

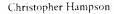
Non-executive Director. Appointed, April 1981; currently a Director of Lloyds Bank, British Petroleum, and other companies; previously Chairman of Ocean Transport & Trading and Deputy Chairman of Lloyds Bank.

Sir James Hamilton KCB MBE FEng

Non-executive Director. Appointed, October 1983; formerly Permanent Under-Secretary of State at the Department of Education and Science, having previously served as Head of Projects Division at the Royal Aircraft Establishment.

Christoper Hampson (Canada)

Non-executive Director. Appointed, February 1989; currently a Director of ICl and Costain Group.



Frank W. Mack



David G. Bury

Sir Peter Baxendell

Dr Alan K. Watkins

Quinton Hazell CBE DL Non-executive Director. Appointed, February 1979; Director of a number of other companies. Founded Quinton Hazell PLC.

Frank W. Mack (USA) Appointed to the Board, January 1990.

Sir Rowland Wright CBE BSc CChem FRSC Non-executive Director. Appointed, February 1979; served successively as the Chairman of ICI and Blue Circle and is a Director of a number of other companies.

Secretary

David R. Gilbert TD MALLM

Group Executive	
A.K. Watkins Chairman	P. Howard
•D.G. Bury	E.P. Jones
C.R. Burns	D.J.D. Lewis
D.R. Gilbert	*F.W. Mack
H.R. Grant	W.J.Richardson
R.P. Hampson	•Group Director

Registered Office

18 St. James's Square London SWIY 4LJ

Registration Number

302913

Solicitors

Simmons & Simmons

Registrar

Lloyds Bank Plc Registrar's Department Goring-by-Sea Worthing West Sussex BN12 6DA

Auditors

Price Waterhouse

Report of the Directors

The Directors submit their annual report and the audited accounts for the year ended 31st December, 1990 which will be laid before the shareholders at the Annual General Meeting to be held on 10th May, 1991.

Group results and dividends

The accounts of the Group appear on pages 34 to 50. The turnover and trading profit of each of the major business segments in which the Hawker Siddeley Group operates are set out in the Financial tables on page 2.

The dividends already paid or recommended are as follows:	1990 £m	1989 Lm
On 5½% cumulative preference shares	0.2	0.2
On ordinary shares:		
Interim of 10.0p per share paid on 31st December, 1990 (1989: 10.0p)	19.8	19.7
Recommended final of 15.0p per share to be paid on 1st July, 1991 (1989: 15.0p)	29.7	29.7
	49.7	49.6

Principal activities and business review

A review of operations during 1990 and of the future development of the Group, including details of significant changes in activities, are contained in the Chairman's statement on pages 4 and 5, in the Chief Executive's review on pages 6 and 7 and in the Review of operations on pages 8 to 27.

Directors

The Directors of the Company are shown on pages 28 and 29 and the interests of the Directors in office on 31st December, 1990 are given on page 47. As recorded in the previous Report, Mr. F.W. Mack was appointed to the Board with effect from 1st January, 1990, and Mr. R.A. Willford retired on 31st March, 1990. Mr. T.W.B. Sallitt decided to take early retirement from 31st October, 1990, and accordingly resigned as a Director with effect from that date.

Sir Peter Baxendell, Mr. Quinton Hazell and Mr. C. Hampson will retire by rotation at the Annual General Meeting and Sir Lindsay Alexander, having attained age 70, is required to retire in accordance with the Companies Acts; being eligible they will offer themselves for re-election, special notice having been received pursuant to Sections 293(5) and 379 of the Companies Act 1985 of the intention to propose resolutions for the re-election of Sir Lindsay Alexander and Mr. Quinton Hazell.

Sir Peter Baxendell has a service contract with the Company requiring twelve months' notice of termination. Sir Lindsay Alexander, Mr. C. Hampson and Mr. Quinton Hazell do not have service contracts with the Company.

The Board knows of no contract of significance in relation to the business of the Company and its subsidiaries in which any Director has a material interest.

Properties

The freehold and long leasehold properties of the Group were valued at 31st December, 1990, the basis being mainly open market value assuming continuation of existing use. The valuation, which was carried out by the Group's professional staff in the U.K. and by external professional valuers overseas, shows a surplus over book amount of £43.9m of which £40.5m has been credited to revaluation reserve in the accounts and the remainder is attributable to the interests of minority shareholders.

Charitable and political contributions

Contributions to charities in the United Kingdom made during the year by the Group amounted to £171,300 (1989: £148,200). In 1990, the Group contributed £8,400 (1989: £7,600) to the Economic League, which might be held to fall within the definition of political contributions for the purpose of Section 234(3) of the Companies Act 1985.

Research and development

There is a continuing programme of research and development aimed at the improvement of existing products, introduction of new ones and better production methods in the Group's factories; further information is provided in the Review of operations.

Auditors

The Auditors, Price Waterhouse, have indicated their willingness to continue in office and a resolution for their reappointment will be submitted to the Annual General Meeting.

Share option schemes

The Executive and Savings Related Share Option Schemes currently contain in their Rules a limitation on the total number of shares which may be placed under option under the Schemes in any three year period. The limit, which is expressed as 3 per cent of the issued share capital at the relevant time, was included in the Rules to comply with the guidelines of the Investment Committee of the Association of British Insurers and has to date given no difficulties

in the operation of the Schemes. However, following an enthusiastic employee response to the offer of further options under the Savings Related Scheme in the Autumn of 1990 we are faced with the possibility that in the period up to 1993 there would be no shares available for option under the Schemes due to the 3 per cent/3 year limitation. The Directors consider it important that they should continue to be able, when appropriate, to offer employees the opportunity to participate in the future of the Group via the acquisition of shares in the Company and, accordingly, are proposing that the 3 per cent 3 year limit should be replaced by a like restriction that the number of shares placed under option under the Schemes in any five year period should not be more than 5 per cent of the ordinary share capital of the Company at the relevant time.

The existing overall limit on the number of shares that may be placed under option under the individual Schemes and under the Schemes combined is not affected by these proposals. The institutional shareholders committee referred to above has expressed the view that the change is reasonable and consistent with their current guidelines and your Directors, being satisfied that the proposal is in the best interests of the Company, recommend shareholders to vote in favour of the resolution to approve the appropriate amendments to the Rules of the Schemes to be put to the forthcoming Annual General Meeting. The Directors intend to vote in favour of the resolution in respect of their own beneficial holdings.

Employment policies

The policy and practice of each subsidiary company covering the arrangements for communication and consultation with employees and for the employment of the disabled has been developed in response to the particular situation pertaining at each site. Each subsidiary company in the UK with more than 250 employees sets out the relevant details in its Directors' Report which is filed with the Registrar of Companies. Details from the Report filed by any subsidiary company may be obtained on application to the Group Secretary.

The Code of Conduct for Companies with interests in South Africa issued (in revised form) by H.M. Government in July, 1986 calls for an annual statement as at 30th June each year. A copy of this document is forwarded to the Department of Trade and Industry and a copy of the latest statement is available on request from the Secretary, Hawker Siddeley Group PLC.

In common with the practice of many large groups, the Company maintains insurance cover to indemnify directors and officers of companies in the Group against liabilities for negligence or breach of duty in the exercise of their responsibilities.

Significant changes in Group structure

Electric Motors

In North America the acquisition of Eaton Technologies Inc (US\$38m) and the electric motor division of Electrohome Limited (CS14.8m) will enhance the Group's small electric and fractional horsepower motor ranges.

In February 1991, the Group agreed to purchase the European industrial batteries business of Chloride Group PLC for £43.5m. Completion is due to take place before the end of March. This acquisition will establish Hawker Batteries as a European market leader in industrial batteries.

General Engineering

The acquisition by Hawker Siddeley Canada of Windsor Aerospace Ltd (Ontario) and Middleton Aerospace Corporation (Massachusetts) for US\$25m complements the business base of Orenda Division with machined components for the aerospace industry.

Substantial shareholdings

At 21st March, 1991, the Company had received the following notifications of interests of 3% or more in the Company's

Ordinary Share Capital:	Date of Notification	Number of Shares	³ 0
Name	28.1.1991	7,609,245	3.84
Guardian Royal Exchange Plc Prudential Corporation	10.9.1990	7,942,013	4.01

By Order of the Board D.R. Gilbert, Secretary 21st March, 1991

Group Responsibilities

Group Finance Director Group Secretary D. R. Gilbert Director – Human Resources E. P. Jones Director – Strategic Planning D. J. D. Lewis Electric Motor Division P. Howard Brook Crompton Brook Crompton Betts Electromotors Fasco Motors Electric Power Division R. P. Hampson Brush Electrical Machines Brush Switchgear Brush Transformers Hawker Siddeley Electric Af Hawker Siddeley Power Tran Mirrlees Blackstone South Wales Switchgear Instruments and Controls Division F. W. Mack Daytronic Corporation Dranetz Technologies Fasco Sensors & Controls Hawker Fusegear	
Director – Human Resources E.P. Jones Director – Strategic Planning D.J.D. Lewis Electric Motor Division P. Howard Brook Crompton Brook Crompton Betts Electromotors Fasco Motors Electric Power Division R.P. Hampson Brush Electrical Machines Brush Switchgear Brush Transformers Hawker Siddeley Electric Af Hawker Siddeley Power Tran Mirrlees Blackstone South Wales Switchgear Instruments and Controls F.W. Mack Daytronic Corporation Dranetz Technologies Fasco Sensors & Controls	
Director - Strategic Planning D. J. D. Lewis Electric Motor Division P. Howard Brook Crompton Brook Crompton Betts Electromotors Fasco Motors Electric Power Division R. P. Hampson Brush Electrical Machines Brush Switchgear Brush Transformers Hawker Siddeley Electric Af Hawker Siddeley Power Tran Mirrlees Blackstone South Wales Switchgear Instruments and Controls F. W. Mack Daytronic Corporation Dranetz Technologies Fasco Sensors & Controls	
Electric Motor Division P. Howard Brook Crompton Brook Crompton Betts Electromotors Fasco Motors Electric Power Division R.P. Hampson Brush Electrical Machines Brush Switchgear Brush Transformers Hawker Siddeley Electric Af Hawker Siddeley Power Tran Mirrlees Blackstone South Wales Switchgear Instruments and Controls F. W. Mack Daytronic Corporation Dranetz Technologies Fasco Sensors & Controls	
Brook Crompton Betts Electromotors Fasco Motors Electric Power Division R.P. Hampson Brush Electrical Machines Brush Switchgear Brush Transformers Hawker Siddeley Electric Af Hawker Siddeley Power Tran Mirrlees Blackstone South Wales Switchgear Instruments and Controls F. W. Mack Daytronic Corporation Dranetz Technologies Fasco Sensors & Controls	
Brush Switchgear Brush Transformers Hawker Siddeley Electric Af Hawker Siddeley Power Tran Mirrlees Blackstone South Wales Switchgear Instruments and Controls F. W. Mack Daytronic Corporation Dranetz Technologies Fasco Sensors & Controls	
Division Dranetz Technologies Fasco Sensors & Controls	
Hawker Instruments Westcode Semiconductors Westinghouse Systems	
Batteries Division W. J. Richardson Crompton Eternacell Hawker Batteries Power Conversion	
Aerospace Division C.R. Burns Hawker de Havilland Hawker Pacific HDA Forgings Insumat Standard Aero	
Rail Division H.R. Grant Brush Traction Dimetronic Safetran Systems Corporation Westinghouse Brake & Sign Westinghouse Brake & Sign	al Co. (Australia)
General Engineering Division Crompton Lighting Fasco Consumer Products Lister-Petter Hawker Siddeley Power Plan Hawker Noyes Hawker Siddeley Canada	ıt
Central Office Executives K. J. Chave, FCCA Group Chief Accountant	
J. Hume, FCA Group Treasurer	
R.D. Knott, Head of Group Strategy	

R.B. McDaniel, MA, ACIS Head of Group Planning

Financial Contents

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CONSOLIDATED PROFIT AND LOSS ACCOUNT

For the year ended 31st December, 1990

	1990	1989
Notes	£m	£m
1	2,178	2,146
2	132.9	176.3
	17.4	22.1
	150.3	198.4
3	(9.9)	3.7
	140.4	202.1
4	48.0	68.3
	92.4	133.8
	11.4	10.2
	81.0	123.6
5	25.3	16.9
	55.7	106.7
6	49.7	49.6
25	6.0	57.1
7	40.0-	62.5;
	1 2 3 4	Notes £m 1 2,178 2 132.9 17.4 150.3 3 (9.9) 140.4 4 48.0 92.4 11.4 81.0 5 25.3 55.7 6 49.7 25 6.0

CONSOLIDATED BALANCE SHEET At 31st December, 1990

		1990	1989
	Notes	£m	£,m
Fixed assets			
Tangible assets	10	543.6	505.9
Investments	12	99.7	103.8
		643.3	609.7
Current assets			
Stocks	14	487.2	579.9
Debtors	15	544.7	579.1
Bank deposits and other short term investments		142.0	178.9
Cash at bank and in hand		30.4	37.5
		1,204.3	1,375.4
Creditors: amounts falling due within one year			
Loans and overdrafts	16	104.5	68.7
Trade creditors		255.3	301.7
Other creditors	18	324.6	356.4
		684.4	726.8
Net current assets		519.9	648.6
Total assets less current liabilities		1,163.2	1,258.3
Representing:			
Creditors: amounts falling due after more than one year			
Debenture stocks and loans	19	201.8	224.1
Other long term liabilities	20	5.2	10.0
Provisions for IlabIIIties and charges	21	118.7	138.7
Interest of minority shareholders		98.3	107.8
Capital and reserves			
Called up share capital	23	55.5	55.4
Share premium account	23	26.4	24.2
Revaluation reserve	24	98.1	63.3
Profit and loss account	25	559.2	634.8
Shareholders' funds		739.2	777.7

Sir Peter Baxendell, Chairman

A.K. Watkins, Managing Director and Chief Executive

D.G. Bury, Finance Director

CASH FLOW STATEMENT For the year ended 31st December, 1990

	1990		1	989
	£m	£m	Ĺт	£m
Operating activities				
Profit before tax and before extraordinary items	140.4		202.1	
Depreciation charged	57.7		54.1	
Profits retained by associated companies	(14.8)		(18.1)	
Decrease: (increase) in working capital				
Stocks	49.1		(94.8)	
Debtors	(2.7)		(74.1)	
Creditors	(14.0)		105.4	
Corporate tax paid	(65.4)		(53.3)	
Cash flow from operating activities		150.3		121.3
Investing activities				
Cost of businesses acquired	(69.8)		(156.8)	
Purchase of fixed assets	(91.8)		(87.1)	
Sale of businesses	_		9.5	
Sale of fixed assets	9.2		11.3	
Closure of businesses	(18.9)		(28.1)	
Effect of other deferrals and accruals of investing activity cash flows	(24.7)		20.8	
Cash flow from investing activities		(196.0)		(230.4)
Financing activities				
Payment of dividend to shareholders of Hawker Siddeley	(49.7)		(47.7)	
Payment of dividend to minority shareholders	(3.7)		(4.0)	
Issue of shares by Hawker Siddeley	2.3		1.5	
Issue of shares by subsidiaries	_		3.3	
Cash flow from financing activities		(51.1)		(46.9)
Increase in net borrowings		(96.8)		(156.0)
Net(borrowings)/funds at 1st January	(76.4)		98.2	
Effect of changes in exchange rates	39.3	(37.1)	(18.6)	79.6
Net borrowings at 31st December	~~~	(133.9)		(76.4)

ACCOUNTING POLICIÈS

The Group comprises Hawker Siddeley Group Public Limited Company (Hawker Siddeley) and its subsidiaries. The principal accounting policies, set out below, have remained unchanged from the previous year.

Accounting convention. The accounts have been prepared in accordance with applicable Accounting Standards under the historical cost convention as modified by revaluations of certain properties and investments.

Consolidation principles. The consolidated accounts include the accounts of Hawker Siddeley and its subsidiaries (except as set out in note 13) and those of associated companies, on the basis described below. The accounts of all subsidiaries are made up to 31st December. The principal operating companies are listed on pages 52 to 55. The effective date for consolidation of companies acquired is that on which an offer is declared unconditional in all respects. The results of companies disposed of are consolidated up to the date of disposal.

Goodwill, being the excess of the cost of acquisition over the fair value of the relevant net assets, is charged to reserves. The Group's share of the income and net assets of associated companies, not being subsidiaries, in which a substantial interest is held for trading and commercial reasons, has been included in the consolidated accounts based on the accounts of these companies made up to varying accounting dates in 1990. Details of associated companies are included on page 55.

Translation of foreign currencies. The assets and liabilities of overseas subsidiaries have been expressed in sterling at the rates ruling at 31st December, 1990.

Trading results of overseas subsidiaries have been expressed at the average of the rates ruling during the year. Differences arising from the effect of changes in exchange rates on overseas net assets and foreign currency denominated loans are treated as movements in reserves.

Turnover is sales to third parties and is determined by reference to the selling values of goods delivered and services rendered during the year.

Trading profit (other than on long term contracts) is taken up when goods are delivered and title passes to the customer or when services are rendered, and is stated after making allowance for the estimated cost of after sales service and other expenditure to be incurred subsequently. In the case of long term contracts, namely those extending over more than one year, a prudent level of profit attributable to the proportionate deliveries is taken up if the final outcome of such contracts can be reliably assessed.

On all contracts full provision is made for any losses in the year in which they are first foreseen.

Pension costs. Contributions to the Group's defined benefit pension schemes are charged to profits so as to spread the cost of pensions over the anticipated service lives of employees.

For the Group's defined contribution schemes, contributions are charged as they become payable.

Research and development expenditure (other than that specifically recoverable under contracts) is written off in the year in which it is incurred.

income from investments. Dividends received from UK investments are included at the amount received together with the imputed tax credit. Income received from overseas investments is credited before deducting withholding taxes.

Tangible fixed assets and depreciation. Following the valuation of properties at 31st December, 1990, freehold and long leasehold properties are stated at valuation and other fixed assets at cost to the Group, after deducting accumulated depreciation. The basis of depreciation in 1990 and earlier years has been to write off the cost of all assets, over their estimated useful lives on a straight-line basis.

The rates of depreciation vary according to the type of asset and business but are in general: freehold buildings -2%; leasehold buildings where the lease is 50 years or more -2%; leasehold buildings where the lease is for less than 50 years - over the term of the lease; plant and machinery -10% or 20% according to the nature of the asset.

Stock and work in progress is stated at the lower of cost (including an appropriate proportion of overheads) and estimated realisable value, less progress payments. The estimated realisable value has been arrived at having regard to estimated costs to completion of contracts.

Deferred taxation. Provision is made for deferred taxation arising from timing differences to the extent that the liability will become payable in the foreseeable future. Timing differences are due primarily to the excess of tax allowances on fixed assets over the corresponding depreciation charged in the accounts. No provision is made either for the potential tax on capital gains which would arise in the event of disposal of properties at their valued amounts or for tax which might be payable in the event of distribution of retained profits of overseas subsidiaries or associated companies.

NOTES TO THE CONSOLIDATED ACCOUNTS

Interest Receivable on investments Less payable on: Bank loans and overdrafts Debenture stocks of Hawker Siddeley Loans wholly repayable within five years Loans repayable over a period longer than five years	30.4 15.1 0.6 10.2 14.4 40.3	38. 13. 0. 7. 12.
Interest Receivable on investments Less payable on: Bank loans and overdrafts Debenture stocks of Hawker Siddeley Loans wholly repayable within five years	15.1 0.6 10.2	13. 0. 7.
Interest Receivable on investments Less payable on: Bank loans and overdrafts Debenture stocks of Hawker Siddeley	15.1 0.6	13.
Interest Receivable on investments Less payable on: Bank loans and overdrafts	15.1	13.
Interest Receivable on investments Less payable on:		
Interest Receivable on investments	30.4	38
Interest	30.4	38
		20
the total charged in respect of all leases.		
Amounts relating to finance leases are not material in the context of the Group and the amounts shown above for hire of plant and machinery and for rental of premises represent		
The analysis of Group profit by activity is as shown in the Financial tables on page 2.		
Auditors' remuneration	1.7	
Rental of premises	12.5	1
Hire of plant and machinery	9.6	(
Research and development costs	32.5	2
Power contracting losses	26.7	
Included in the amounts charged above are the following items:		
and after crediting: Surplus on property disposals net of related restructuring and reorganisation costs Income from unlisted investments	0.8 1.1	;
	71.1	
Other external charges Depreciation and amounts written off fixed assets	370.0 57.7	400 5
Raw materials and consumables Other external charges	981.2	981 403
Changes in stocks of finished goods and work in progress	11.7	(54
Staff costs	626.4	59
Other pension costs	10.7	10
Social security costs	46.7	44
Wages and salaries	569.0	54
is arrived at after charging:		
Trading profit excluding associated companies		
	2,178	2,1
South and Central America	21	
Middle East	40	
Africa	64	
Far East	134	
Canada	145	1
Europe	209	1
Australasia	301	3
USA	616	6
	648	6
United Kingdom	r.m	
and the analysis by geographical markets is as follows:	1990 Em	11
	1990	

Taxation on profit on ordinary activities	1990	1989
and the second s	£m	£m
Corporation tax at 341400 (1989: 35%)	27.5	35.5
UK deferred taxation	(0.3)	-
Double taxation relief	(2.5)	(7.2)
Overseas taxation	16.4	31.4
	41.1	59.7
Associated companies:		3.0
Corporation tax at 341/4% (1989: 35%)	2.6	2.9
Overseas taxation	4.3	5.7
	6.9	8.6
	48.0	68.3
Extraordinary Items		
Loss on closure and disposal of businesses	(18.9)	(28.1)
Settlement of UK Corporation tax assessments of an overseas subsidiary	(10.7)	-
Tax (including £(0.8)m (1989: £8.7m) of deferred tax)	4.9	10.0
	(24.7)	(18.1)
Minority interest	(0.6)	1.2
	(25.3)	(16.9)
Dividends		
On 51/2% cumulative preference shares (3.85% net of tax)	0.2	0.2
On ordinary shares:		
Interim of 10.0p per share paid 31st December, 1990 (1989: 10.0p)	19.8	19.7
Recommended final of 15.0p per share to be paid on 1st July, 1991 (1989: 15.0p)	29.7	29.7
	49.7	49.6
Earnings per Ordinary Share		
Earnings per ordinary share amount to 40.8p (1989: 62.5p).		
The calculation is based on earnings of £80.8m (1989: £123.4m), as shown below, and		
197.8m (1989: 197.4m) ordinary shares being the average number in issue throughout the year	r.	
Group profit after taxation attributable to Hawker Siddeley		
shown in the consolidated profit and loss account	81.0	123.6
Less: Preference dividend	0.2	0.2

NOTES TO THE CONSOLIDATED ACCOUNTS continued

	Emoluments of the Directors of Hawker Siddeley	1990	198
	a Aggregate emoluments:	€000	\mathcal{L}^{00}
	Fees	60	5
	Management remuneration and pension scheme contributions	1,179	98
	Pensions paid in respect of former Directors	128	19
		1,367	1,22
	b The numbers of Directors whose emoluments, excluding pension scheme contributions,		
	shown in the following table:		,,,,,
]	Emoluments	1990	198
,	$f_{L} = 10,001 - f_{L} = 15,000$	5	
	$f_{4} = 40,001 - f_{4} = 45,000$	1	
	$(\xi 80,001 - \xi 85,000)$	_	
	$f_{\ell} = 90,001 - f_{\ell} = 95,000$	_	
		1	
	$\tilde{\xi}_{100,001} - \tilde{\xi}_{105,000}$	· -	
	$\tilde{\xi}_{105,001} - \tilde{\xi}_{110,000}$	_	
	$\xi_{110,001} - \xi_{115,000}$	_	
	$\xi_{120,001} - \xi_{125,000}$	1	
	ξ 135,001 – ξ 140,000	1	
	ξ 155,001 – ξ 160,000	<u>.</u>	
	$\zeta_{260,001} - \zeta_{265,000}$	1	
_	The emoluments included above:		
	for the Chairman were	605.047	(0) 01
	for the highest-paid Director were	£95,247 £261,739	£82,84 £158,34
	Part year.		
,	Analysis of average number of employees		
I	Divisional analysis:		
E	Electric Motors	8,900	7,10
E	Electric Power	7,800	7,30
I	nstruments and Controls	7,600	7,40
Е	Batteries	3,400	3,30
A	Aerospace	5,300	4,90
	Rail	3,600	3,30
C	General Engineering	7,300	7,50
C	Continuing businesses	43,900	40,80
	Discontinued activities	700	1,80
_		44,600	42,60
	Geographical analysis:		_
	inited Kingdom	21,800	21,20
	forth America	14,200	12,70
	ustralasia	5,500	5,70
0	Other	3,100	3,00
		44,600	42,60

Tangible fixed assets	Freehold	Leasehold	Plant and	
	property	property	machinery	Total
	£m	£m	£m	£m
Cost or valuation:				
At 31st December, 1989	191.8	29.0	649.5	870.3
Effect of changes in exchange rates	(15.2)	(3.7)	(64.2)	(83.1)
Additions at cost	16.8	2.3	72.2	91.3
Cost of assets of acquisitions in year	4.5	0.4	15.6	20.5
Disposals	(1.6)	(0.3)	(27.5)	(29.4)
Surplus on revaluation	27.7	2.3	_	30.0
At 31st December, 1990	224.0	30.0	645.6	899.6
Accumulated depreciation:				
At 31st December, 1989	17.1	5.7	351.8	374.6
Effect of changes in exchange rates	(0.9)	(0.9)	(29.7)	(31.5)
Charge for year	3.7	1.6	52.4	57.7
Disposals	(0.1)	(0.3)	(19.8)	(20.2)
Written back on revaluation	(13.2)	(0.7)		(13.9)
At 31st December, 1990	6.6	5.4	354.7	366.7
Net book amount at 31st December, 1990	217.4	24.6	290.9	532.9
Jigs, tools and equipment at cost less amounts written off				10.7
				543.6
Net book amount at 31st December, 1989	174.7	23.3	297.7	495.7
Jigs, tools and equipment at cost less amounts written off				10.2
				505.9

The parent company tangible fixed assets comprise freehold and long leasehold property with a valuation and accumulated depreciation of £11.2m and NIL (1989: £7.1m and £0.6m) respectively, and plant and machinery with a cost and depreciation of £2.6m and £1.6m (1989: £2.3m and £1.5m) respectively.

Freehold and long leasehold properties were revalued at 31st December, 1990 in the United Kingdom by an employee who is a Fellow of the Royal Institution of Chartered Surveyors and reviewed by Messrs. Edward Rushton Son & Kenyon who with other professional valuers also valued overseas properties. The basis of the valuation was open market value assuming continuance of existing use or, exceptionally where properties are of a specialised nature, by reference to depreciated replacement cost; properties which have been designated for disposal have been valued at estimated net realisable value.

The original cost of properties carried at valuation totals £177.9m (Parent Company £1.5m).

Leasehold property includes short-term leases at a net book amount of £5.5m (1989: £5.7m).

Leasing operations.

10

The Group's Canadian subsidiary, CGTX Inc (55% owned by Hawker Siddeley Canada Inc), is in the business of leasing railway rolling stock to North American railroad operators.

Amounts included in plant and machinery are:	1990	1989
	£m	£m
Cost	145.0	159.0
Accumulated depreciation	48.9	54.5
Net book amount	96.1	104.5
Pledged as security for mortgage equipment notes (see note 19)	40.2	52.2
Rental income from these operations included in sales	27.4	27.1

NOTES TO THE CONSOLIDATED ACCOUNTS continued

11 Capital commitments

1

Commitments of the Group for capital expenditure not included in the balance sheet at 31st December, 1990 amounted to £27m (1989; £28m); capital expenditure authorised by the Directors but not committed at 31st December, 1990 amounted to approximately £116m (1989; £107m).

Fixed asset investments	Asso	ciated	Oth	ner		
	comp	anies	investi	ments	Total	
	1990	1989	1990	1989	1990	1989
	£m	£m	£m	£m	£m	£m
Cost or share of net assets	95.0	100.3	6.8	5.0	101.8	105.3
Less: Amounts written off	-		2.1	1.5	2.1	1.5
Net book amount	95.0	100.3	4.7	3.5	99.7	103.8
Movement in net book amount in 1990:						
Effect of changes in exchange rates	(12.0)		(0.2)		(12.2)	
Additions	_		2.0		2.0	
Share of associated companies' retained reserves	6.7		_		6.7	
Amounts written off	_		(0.6)		(0.6)	
	(5.3)		1.2		(4.1)	
Included in the net book amounts shown above						
are investments listed on recognised stock						
exchanges outside the UK of	24.5	28.8	0.1	1.0		
whose market values were	40.8	41.8	0.9	1.1		
Other investments - unlisted						
Aggregate profits less losses attributable to the						
Group in respect of accounts received in 1990:						
Before tax					1.1	1.3
After tax					0.7	0.8
Accumulated undistributed profits less losses						
since acquisition attributable to the Group					2.4	2.0

13 Investment in unconsolidated subsidiary

The Group owns 90.5% of Richmond Power Enterprise, a limited partnership which owns a Hawker Siddeley Power Engineering Inc constructed power station in Richmond, Virginia, USA. The profit earned on this construction contract has been eliminated in these accounts and the investment has not been consolidated as it is actively held for resale, a letter of intent having been signed on 13th March 1991.

This power station has a net book value of £78.4m at 31st December 1990 and is funded by £69.8m of limited recourse net bank borrowings and £8.6m owing to Hawker Siddeley Power Engineering Inc.

The Group is committed to injecting approximately £13.6m as partnership capital. With the exception of £15.8m which is contingent upon fuel related matters, the remaining bank borrowings are without further recourse.

14	Stocks	1990	1989
• •		£m	£m
	Raw materials and consumables	146.4	150.0
	Long term contract work in progress	68.2	130.0
	Other work in progress	162.6	178.2
	Finished goods and goods for resale	160.3	202.0
		537.5	660.2
	Less: Progress payments - Long term contracts	(21.8)	(39.6)
	- Other	(28.5)	(40.7)
		487.2	579.9
15	Debtors Trade debtors	448.7	457.5
15	Debtors		
	Trade debtors	448.7	
	Amounts owed by associated companies	1.6	1.7
	Other debtors (including £12.6m (1989: £27.9m) falling due after more than one year)	49.9	85.2
	Amounts recoverable on contracts	17.3	17.4
	Prepayments and accrued income	27.2	17.3
		544.7	579.1
4.6	Land and another		
16	Loans and overdrafts	31.1	6.4
	Debenture stocks and loans		
	Bank loans and overdrafts	73.4	62.3
		104.5	68.7

17 Bank guarantees and contingent liabilities

Hawker Siddley has guaranteed bank overdrafts of certain subsidiaries which at 31st December, 1990 amounted to £40.4m (1989: $\cancel{\text{£}47.8m}$). There are contingent liabilities arising in the ordinary course of business relating principally to bonds outstanding, contract disputes and claims involving products manufactured or distributed by the Group, but in the opinion of the Directors adequate provision has been made for losses which might fall on the Group.

18 Other creditors

Proposed dividend	29.8	29.8
Accruals and deferred income	77.5	93.3
Other creditors	46.2	4 5.6
Social security	8.7	8.4
Taxation	49.8	70.4
Bills of exchange	9.1	8.1
Payments received on account	103.5	100.8

NOTES TO THE CONSOLIDATED ACCOUNTS continued

Debenture stocks and loans	1990		1989	
Repayable over a period longer than five years	£m	£m	Ĺт	£
Borrowings of subsidiaries:				
US\$ Commercial paper	1	57.1		146
Mortgage equipment notes - secured on railway rolling stock				
leasing fleet (see note 10)				
Due by instalments between 1991 and 2000 interest rates vary				
between 8 8 and 1114%		7.1		11
Other borrowings (secured £3.2m - 1989: £5.8m)		4.0		5
	1	68.2		162
Repayable within five years				
Borrowings of Hawker Siddeley:				
71/4% Debenture stock 1991/92 (secured)	15.6		15.6	
8¾% Debenture stock 1991/92 (secured)	2.8		2.8	
Less: Redeemed to date and cancelled	(10.2)		(10.1)	
		8.2		8
US\$50m 131/4% Notes due 1991	25.9		31.1	
Bank loans	0.8		1.1	
		26.7		32
		34.9		40
Borrowings of subsidiaries:				
Mortgage equipment notes - secured on railway rolling stock				
leasing fleet (see note 10)		13.1		17.
Other borrowings (secured £5.6m - 1989: £4.8m)		33.7		42.
		81.7		100.
Total debenture stocks and loans	2	49.9		263.
Less: Instalments repayable within one year, included in				
current liabilities		48.1		39.
	2	01.8		224.
Representing instalments repayable:				
Between one and two years hence		20.9		37
Between two and five years hence		18.9		33
In five years or more	1	62.0		153.
				224.

The aggregate amount of bank loans and overdrafts was £81.7m (1989: £62.9m).

Redemption of the Hawker Siddeley Debenture stock is by annual sinking funds of £0.3m ($7\frac{1}{4}$ % stock) and £0.06m ($8\frac{1}{4}$ % stock). At the option of the Company this obligation may be satisfied by purchase in the market.

Commercial paper is short term borrowings issued at a discount in the commercial paper markets in Europe. However, for balance sheet purposes, this paper is classified as a long term liability as it is the intention to renew the borrowings as they fall due, or to refinance the borrowings through existing long term bank facilities. This paper is guaranteed by Hawker Siddeley.

O Other long term liabilities 1990 1989 Em £m £m Taxation 5.5 Other creditors 5.2 4.5 5.2 10.0

At 31st December, 1990	113.4	1.7	3.6	118.7
Expenditure in 1990	(77.0)	(0.5)	-	(77.5)
Amounts set aside in 1990	66.3	0.8	0.3	67.4
Effect of changes in exchange rates	(9.5)	(0.2)	(0.2)	(9.9)
At 31st December, 1989	133.6	1.6	3.5	138.7
	Ĺт	£m	£m	£m
	provisions	Pensions	taxation	Total
Provisions for liabilities and charges	Other		Deferred	

Other provisions include after sales service and reorganisation.

There are pension commitments to past Directors amounting to £29,000 per annum which are not included in provisions.

	1990	1989
	£m	£m
The deferred tax balance comprises:		
Capital allowances	9.2	10.9
Other UK timing differences	(1.9)	(8.7)
Advance corporation tax	(5.5)	(1.6)
UK corporation tax	1.8	0,6
Overseas taxation	1.8	2.9
	3.6	3.5

There is deferred taxation of £31.5m (UK £8.4m; Overseas £23.1m) not provided in the accounts as this relates to timing differences for which no liability will become payable in the foreseeable future.

22 Pension costs

21

The Group operates a number of pension schemes, the majority being defined benefit arrangements. Total pension costs were **£10.7m** (1989: £10.4m) of which **£6.9m** (1989: £5.5m) relates to overseas schemes mainly in the USA, Canada and Australia. The main UK scheme is the Hawker Siddeley Pension Fund. The assets of this scheme are held in a separate trustee-administered fund. The latest actuarial valuation of this scheme was carried out by independent actuaries as at 31st March, 1989 using the projected unit method. The principal assumptions adopted were that the long term annual rate of return on investments would be 9.5%, annual dividend increases would be 5% and the average annual increases in pensionable salaries and pensions in payment would be 7.5% and 5% respectively. The actuarial value of the assets was sufficient to cover 154% of the value of the projected benefits to which members will be entitled for their membership up to the valuation date. The market value of the assets of the schemes as at the date of the actuarial valuation was £316.1m.

The assets of the main overseas schemes are also held in separate trustee-administered funds and the schemes were fully funded at their most recent valuation dates.

NOTES TO THE CONSOLIDATED ACCOUNTS continued

3	Share Capital of Hawker Siddeley	Autho	Allowed and fully pard		
		1990	1989	1990	1989
		£m2	£m	£m	£m
	51200 cumulative preference shares of £1 each	6.0	6.0	6.0	6.0
	Ordinary shares of 25p each	65.0	65.0	49.5	49.4
		71.0	71.0	55.5	55.4

Issued during the year

During the year, 548,285 ordinary shares of 25p each were issued following exercise of options under the Executive Share Option Scheme, Overseas Executive Share Option Scheme and Savings Related Share Option (SAYE) Scheme. The aggregate consideration received in respect of these allotments was £2.3m, of which £2.2m represented a premium over the nominal value.

At 31st December, 1990	3,751,072	1,518,757
Options lapsed	(234,702)	(109,090)
Options exercised	(430,530)	(117,755)
New options issued	3,057,562	891,717
At 31st December, 1989	1,358,742	853,885
	Scheme	Schemes
	SAYE	Executive
The options to subscribe for ordinary shares of 25p held by Group employees were as follows:		Overseas
Shares under option		UK and

Options under the Executive Schemes are normally exercisable 3-10 years after grant and are currently exercisable at various dates up to 2000 at prices ranging between £4.55 and £6.76.

Options under the SAYE Scheme are normally exercisable 5 years after grant and are currently exercisable at various dates up to 1996 at prices ranging between £3.21 and £6.02.

Revaluation reserve	Hawker		Associated	
	Siddeley	Subsidiaries	companies	Total
	£m	£m	£m	£,m
At 31st December, 1989	5.3	52.8	5.2	63.3
Effect of changes in exchange rates	-	(3.5)	(0.9)	(4.4)
Transfer to profit and loss account in respect of depreciation				
and disposals	-	(1.3)	_	(1.3)
Surplus on revaluation of land and buildings in 1990	4.8	35.7	-	40.5
At 31st December, 1990	10.1	83.7	4.3	98.1

Profit and loss account	Hawker		Associated	
	Siddeley	Subsidiaries	companies	Total
	£m	£m	£m	£m
At 31st December, 1989	71.8	529.9	33.1	634.8
Exchange differences on translation	12.6	(44.4)	(11.0)	(42.8)
Amount retained in 1990	(16.2)	14.4	7.8	6.0
Goodwill on acquisitions		(38.4)	(1.7)	(40.1)
Transfer from revaluation reserve		1.3	-	1.3
At 31st December, 1990	68.2	462.8	28.2	559.2

Cumulative Goodwill net of disposals written off against the profit and loss account amounts to £366.6m.

Goodwill on acquisitions		Fair value	
	Book value	adjustment	Total
	£,m	£,m	£m
Fixed tangible assets	20.0	0.5	20.5
Stocks	14.5	0.2	14.7
Debtors	12.5	-	12.5
	27.0	0.2	27.2
Total assets	47.0	0.7	47.7
Creditors	(7.9)	(0.1)	(8.0)
Provisions	(1.0)	(13.4)	(14.4)
Deferred taxation	(0.5)	1.0	0.5
Net assets	37.6	(11.8)	25.8
Minority interest			3.9
			29.7
Cash consideration			67.9
Net borrowings assumed			1.9
Cost			69.8
Goodwill on acquisitions			40.1

Adjustments have been made to the book values of the net tangible assets acquired to reflect their fair values to the Group and to provide for costs arising as a consequence of the acquisitions.

Adjustments amounting to £1.6m were made to restate the net assets of acquisitions under Group Accounting Policies and £13.4m of provisions for reorganisation and other acquisition costs were created. During the year £21.5m of fair value provisions were utilised and no provisions were released unused or applied for another purpose.

27 Directors' interests

26

Ordinary Shares			Options to Subscribe for Ordinary Shares			
a In Shares	Balance at	Balance at	Balance at	Granted	Exercised	Balance at
	1 Jan 1990	31 Dec 1990	l Jan 1990	during Year	during Year	31 Dec 1990
Sir Lindsay Alexander	1,000	1,000	-	-	-	_
Sir Peter Baxendell	5,375	9,075	-	-	-	_
Mr. D. G. Bury	1,000	1,000	33,923	44,153	9,115	68,961
			* 1,701	*1,168		*2,869
Sir James Hamilton	500	500	_	-		-
Mr. C. Hampson	500	500	-	-		_
Mr. Quinton Hazell	8,000	13,000	_	-		_
Dr. A. K. Watkins	1,500	1,500	15,698	145,916		161,614
			-	*3,504	-	*3,504
Sir Rowland Wright	2,000	3,237	_		_	_

These options are held under the Executive Share Option Scheme except for those marked • which are held under the Savings Related Share Option Scheme. In addition, Sir Lindsay Alexander held 250 5½% Cumulative Preference Shares at 1st January, 1990 and 31st December, 1990. All the above interests are beneficial. There have been no changes in directors' interests between 31st December, 1990, and the date of this Report.

b In Contracts

During the year the Company concluded an agreement with certain non-executive directors, namely Sir Lindsay Alexander, Sir James Hamilton, Mr. Quinton Hazell and Sir Rowland Wright for the payment of a pension of £7,000 p.a. to each of those directors upon their retirement. These pensions reflect undertakings previously given to the directors concerned; in future, remuneration receivable by non-executive directors will not be pensionable.

28 Approval of financial statements

These financial statements were approved by a duly appointed and authorised committee of the Board of Directors on 21st March, 1991.

OTHER INFORMATION

Dividend and interest payment dates

Recommended final dividend (15.0p per share)

71 ₄ 0₀ Debenture stock	30th June and 31st December
85400 Debenture stock	30th June and 31st December
51/2% Cumulative preference shares	lst February and 1st August
US\$50m 131/4% Notes due 1991	20th September
Ordinary shares In respect of the year ended 31st December, 1990:	
Interim dividend (10.0p per share)	31st December, 1990

lst July, 1991

Number of share and debenture holders	At 31st December	
	1990	1989
Ordinary shareholders	29.200	30,600

30,600 Preference shareholders 900 800 Debenture holders 1,100 1,200 32,700 31,100

Capital gains tax

For the purposes of capital gains tax, the market values of Hawker Siddeley's shares were as follows:

	Ordinary shares	5120 Cumulative
	of 25p each	preference shares
At 6th April, 1965 for base cost purposes only	37½p	74p
At 31st March, 1982 for indexation purposes	299p	35½p

The 'close company' provisions of the Income and Corporation Taxes Act 1988 do not apply to Hawker Siddeley.

PARENT COMPANY BALANCE SHEET

At 31st December, 1990

	Notes	1990	1989
		£m	£m
Fixed assets	10		7.3
Tangible assets	10	12.2 92.5	7.3 67.8
Investments in subsidiaries			
		104.7	75.1
Amounts owed by Group companies			
Loan accounts (repayable on demand)		255.8	311.8
Loan accounts (repayable 1992)		25.9	31.1
		281.7	342.9
Current assets			
Amounts owed by Group companies		34.2	80.9
Advance corporation tax recoverable		54.0	65.6
Other debtors		6.2	2.2
Bank deposits and other short term investments		2.4	0.9
Cash at bank and in hand		6.4	4.2
		103.2	153.8
Creditors: amounts failing due within one year			
Amounts owed to Group companies		_	0.3
Loans and overdrafts		33.2	3.1
Taxation		3.0	16.5
Dividends		29.8	29.8
Other creditors		5.2	4.0
		71.2	53.7
Net current assets		32.0	100.1
Total assets less current liabilities		418.4	518.1
Representing:			
Amounts owed to Group companies			
Loan accounts (repayable on demand)		250.0	322.0
Creditors: amounts failing due after more than one year			
Debenture stocks and loans		8.2	39.4
Capital and reserves			
Called up share capital	23	55.5	55.4
Share premium account	23	26.4	24.2
Revaluation reserve	24	10.1	5.3
Profit and loss account	25	68.2	71.8
Shareholders' funds		160.2	156.7
		418.4	518.1

In accordance with Section 230(1)-(4) of the Companies Act 1985 no separate profit and loss account has been presented for the parent company.

Sir Peter Baxendell, Chairman

A. K. Watkins, Managing Director and Chief Executive

D. G. Bury, Finance Director

FIVE YEAR REVIEW

	1990	1989	1988	1987	1986
	£m	£m	£m	£m	£m
Turnover					
UK companies - Home	632	617	594	535	505
UK companies - Export	337	285	309	329	348
	969	902	903	864	853
Overseas companies	1,209	1,244	894	821	703
	2,178	2,146	1,797	1,685	1,556
Trading profit					
Electric Motors	36.2	34.1	22.3	17.1	14.5
Electric Power	38.2	28.2	23.1	23.1	21.9
Instruments and Controls	15.0	29.5	29.8	26.6	17.4
Batteries	14.3	14.6	11.9	14.3	14.1
Aerospace	22.0	18.4	15.8	16.1	16.7
Rail	13.6	19.2	15.7	13.0	12.4
General Engineering	37.7	61.6	52.3	49.9	41.9
Discontinued activities	(26.7)	(7.2)	12.7	2.3	5.5
Trading profit	150.3	198.4	183.6	162.4	144.4
Interest	(9.9)	3.7	0.1	0.8	7.7
Profit before taxation	140.4	202.1	183.7	163.2	152.1
Taxation and minority interests	(59.4)	(78.5)	(72.8)	(67.5)	64.7
Profit attributable to Hawker Siddeley	81.0	123.6	110.9	95.7	87.4
Capital employed					
Shareholders' funds	739.2	777.7	780.4	721.3	760.5
Minority interests	98.3	107.8	87.2	95.2	102.9
Payments received on account	103.5	100.8	68.0	53.0	45.4
Net borrowings. (funds)*	133.9	76.4	(98.2)	(45.9)	(46.4)
	1,074.9	1,062.7	837.4	823.6	862.4
Represented by:					
Fixed assets	643.3	609.7	507.5	474.6	519.5
Net current assets (including provisions and other					
long term liabilities)	431.6	453.0	329.9	349.0	342.9
	1,074.9	1,062.7	837.4	823.6	862.4
Statistics					
Return on capital employed**	14.0%	18.7%	21.9%	19.7%	16.7%
Return on sales (excluding associated)	6.1%	8.2%	9.1%	8.4%	8.10
Earnings per ordinary share	40.8p	62.5p	56.2p	48.5p	44.3p
Dividend per ordinary share	25.0p	25.0p	22.5p	19.0p	17.0p

Notes

[•] Net borrowings (funds) comprise bank, cash and short term investments less debenture stocks, loans and overdrafts.

^{••} In 1990 the amount for fixed assets incorporates the current year revaluation of Group properties. Had the properties not been revalued in 1990 the percentage trading profit to capital employed would have been 14.6% instead of 14.0 as shown.

REPORT OF THE AUDITORS

To the members of Hawker Siddeley Group Public Limited Company

We have audited the financial statements on pages 34 to 47 and pages 2 and 49 in accordance with Auditing Standards.

In our opinion the financial statements give a true and fair view of the state of affairs of the Company and the Group at 31st December, 1990 and of the profit and cash flow of the Group for the year then ended and have been properly prepared in accordance with the Companies Act 1985.

Price Waterhouse, Chartered Accountants Southwark Towers 32 London Bridge Street London SEI 9SY

21st March, 1991

PRINCIPAL OPERATING UNITS, CHIEF EXECUTIVES AND MAIN PRODUCTS

ELECTRIC MOTORS DIVISION

Brook Crompton Ltd.

Large Industrial Motors Guiseley: Large integral horsepower ac electric motors. P. Howard Chairman J.R. Coldwell Managing Director

Small Industrial Motors Huddersfield and Honley: Small integral horsepower ac electric motors. P. Howard Chairman G. Oldroyd Managing Director

Fractional Motors Doncaster: Small power ac electric motors. P. Howard Chairman

R. Priestley Managing Director

Brook Crompton Controls Ltd.

Wakefield: Motor starters, motor control systems, programmable controllers. G. Oldroyd Managing Director B. Holdsworth Director and General Manager

Electromotors Ltd.

Birmingham and Newcastle-under-Lyme: Industrial and fractional horsepower electric motors. M.R. Covell General Manager R. Powell General Manager

Buil Electric Ltd.

Ipswich: dc electric motors. G. Oldroyd Chairman J.G. Brook Managing Director

Brook Crompton Betts Pty Ltd.

Sydney, Australia: Electric motors. P. Howard Chairman J.D. Lunn Managing Director

Fasco Motors

Chesterfield, Ozark, Cassville, Eldon and Tipton, Missouri, USA: Fractional horsepower electric motors and custom blowers.

R.B. Karpen President

Eston Technologies inc.

Eaton Rapids, Missouri, USA: Fractional horsepower electric motors. R.B. Karpen Chairman

Brinkiey Motor Products inc.

Brinkley, Arkansas, USA: Fractional horsepower electric motors. R.B. Karpen Chairman

Fasco Motors Ltd.

Cambridge, Ontario, Canada: Fractional horsepower electric motors and dc electric motors. R.B. Karpen Chairman

Harowe Servo Controls

West Chester, Pennsylvania, USA: and St. Kitts, Wl: Subfractional horsepower electric motors and servo rotary components.

R.B. Karpen Chairman and President

Torin Ltd.

Swindon: Custom blowers and fans for electronics cooling and heating, ventilating and air conditioning applications.

R.B. Karpen Chairman P. Dobson Managing Director

Von Weise Gear Company

St. Clair, Missouri, USA: Fractional horsepower gearmotors and gear reducers.

R.B. Karpen Chairman and President

Crompton Greaves Ltd. √

India (37.5%): Motors, transformers, switchgear, fusegear and lighting.

Eico Eiettromeccanica Frateiii Colombo S.p.A. §

Italy (49.0%): Small electric motors for refrigeration, ventilation and air conditioning.

ELECTRIC POWER DIVISION

Brush Electrical Machines Ltd.

Loughborough: ac and dc motors and generators and associated control equipment for diesel and turbine drives. R.P. Hampson Chairman W.M.M. Petrie Managing Director

Brush Switchgear Ltd.

Loughborough: Indoor and outdoor switchgear and medium voltage motor control gear.

R.P. Hampson Chairman M.G. Simms Managing Director

Brush Transformers Ltd.

Loughborough: Distribution transformers, cast resin and air cooled transformers, flameproof transformers for hazardous conditions, transformers for rail power equipment. R.P. Hampson Chairman

M.F. Radcliffe Managing Director

Hawker Siddeley Power Engineering Ltd.

Burton-on-the-Wolds. Subsidiary in USA: Project engineers for the design and construction of power generation and electrical transmission and distribution systems. R.P. Hampson Chairman

K. Sinclair Director and General Manager

Hawker Siddeley Power Transformers Ltd.

Walthamstow: Larger power transformers for generation and transmission. On-load tapchangers and off-circuit tap selectors. R.P. Hampson Chairman D.J. Clark Managing Director

Mirriees Biackstone (Stamford) Ltd.

Stamford: Medium-speed diesel and dual-fuel engines for industrial, traction and marine applications, diesel alternator sets for power stations, marine propulsion and auxiliary drives. R.P. Hampson Chairman H. Watson Managing Director

Mirriees Biackstone (Stockport) Ltd.

Stockport: Larger medium-speed diesel and dual-fuel engines for industrial, traction and marine applications, diesel alternator sets for power stations, marine propulsion and auxiliary drives. R.P. Hampson Chairman H. Watson Managing Director

South Waies Switchgear Ltd.

Blackwood: Indoor and outdoor switchgear and medium voltage motor control gear. Line equipment. R.P. Hampson Chairman M.G. Simms Managing Director

South Wales Transformers

Treforest: Distribution transformers for industrial and public utility supply. R.P. Hampson Chairman E. Owen Director and General Manager

Hawker Siddeley Switchgear Pty Ltd.

Sydney, Australia: Manufacturers and distributors of electrical switchgear and control gear.

J.A. King Managing Director

Hawker Siddeley Electric Africa (Pty) Ltd.

R.P. Hampson Chairman J.H. Annandale Managing Director

Machines

Germiston, South Africa: Electric motors, merchandising and servicing of electric motors and diesel engines.

Switchgear

Roodepoort, South Africa: Indoor and outdoor switchgear, motor control gear, overhead line equipment, on-load tapchangers and turnkey projects.

Transformers

Wadeville, South Africa: Transformers for transmission and distribution and for specialised applications. Rectifiers and packaged sub-stations.

see notes on page 55

ELECTRIC POWER DIVISION

continued

South Wales Electric (Pvt) Ltd.

Harare and Bulawayo, Zimbabwe: Transformers for transmission and distribution. High voltage switchgear. Merchandising and servicing of electric motors and diesel engines. R.P. Hampson Chairman J.P. Demblon Managing Director

Augier SA

Carros, France: Public lighting and airport lighting transformers and controls.

M.F. Radcliffe Chairman G.G. Constans Managing Director

Kirloskar Electric Co Ltd. § 'India (20.3%): Motors, transformers, alternators and control gear.

INSTRUMENTS AND CONTROLS DIVISION

Hawker Fusegear Ltd.

Burton-on-the-Wolds and Workington: Industrial and semiconductor fuselinks and fusegear for high and low voltage systems.

F.W. Mack Chairman R.E. Gibbons Managing Director

Hawker instruments Ltd.

Witham and subsidiaries in Australia, Europe, Far East and USA: Electrical and electronic indicating and control instruments.

E. Tyson Chairman and Managing Director

Westcode Semiconductors Ltd.

Chippenham: High power semiconductor devices.

F.W. Mack Chairman C.V. Miles Managing Director

Westinghouse Systems Ltd.

Chippenham: Computer-based supervisory and automation control equipment. Materials handling equipment. Mine transportation control systems and equipment. Marine and industrial pneumatic control equipment. E.W. Mack Chairman D.E.G. Stark Managing Director

Brush Fuses inc.

Chicago, Illinois: Laurence Harbor, New Jersey, USA, Mexico and Haiti: Fuselinks and terminal blocks. R.E. Gibbons Chairman

Daytronic Corporation

Dayton, Ohio, USA: Measurement and control instrumentation.
E. Tyson Chairman
D.S. Reeder President

Dranetz Technologies, inc.

Edison, New Jersey, USA: Precision electronic instrumentation products and power monitoring equipment.

E. Tyson Chairman

C.I.W. Baxter President

Fasco Controls

Shelby, North Carolina, USA: Pressure and temperature controls.

J. Kennedy General Manager

Aerospace Avionics inc.

Bohemia, New York, USA: Electrical products primarily for aircraft applications. D.L. Bennett *Chairman* G.M. LaButti *President*

Ciarostat Mfg Co. inc.

Dover, New Hampshire; Richmond and Norway, Maine; El Paso, Texas, USA and Juarez, Mexico: Electronic components for instrumentation, sound reproduction and recording equipment, telecommunications, aerospace, automotive, computer and automation applications.

D.L. Bennett Chairman
J.C. Horne President

Electro Corporation

Sarasota, Florida, USA: Motion-, presence- and position-sensing components and equipment for the industrial, automotive, military and aerospace markets, photo-electric scanners and bar code equipment. D.L. Bennett Chairman D.H. Schneider President

Eimwood Sensors inc.

Pawtucket, Rhode Is. and Bell, California, USA: Commercial and precision thermostats, and allied consumer and commercial products. D.L. Bennett *Chairman* D.H. Schneider *President*

Eimwood Sensors Ltd.

North Shields: Thermostats, temperature transmitters and PTC thermistors for consumer and commercial applications. D.L. Bennett *Chairman* P.J. Wilson *Managing Director*

Fasco Sensors and Controls

Pawtucket, Rhode Island, USA: Non-captive sensors, automotive switches, power conditioning equipment and electro-mechanical components. E.W. Mack Chairman D.L. Bennett President

Mason Electric Company, inc.

Glendale, California, USA: High-current rotary and toggle switches and grips D.L. Bennett *Chairman* G.M. LaButti *President*

Sen-i-Sys

Plano, Texas, USA and Juarez, Mexico: Motion- and position-sensing components. D.L. Bennett Chairman R.J. Crouse President

SenSym inc.

Sunnyvale, California, USA: High technology silicon-based pressure sensors, solid-state, integrated sensor systems and accelerometers.

D.L. Bennett *Chairman*D.A. Dauenhauer *President*

LazerData inc.

Orlando, Florida, USA: Bar coding equipment.
D.L. Bennett Chairman
B.E. Goble President

BATTERIES DIVISION

Crompton Eternaceli Ltd.

South Shields: Primary battery systems for industrial and military applications. W.J. Richardson *Chairman* D. J. Edwards *Managing Director*

Hawker Energy Products Ltd.

Newport: Sealed lead-acid batteries for aircraft and high performance industrial applications.
W.I. Richardson Chairman

W.J. Richardson Chairman I.C. Wells Managing Director

Oldham Crompton Batteries Ltd.

Denton, Manchester: Traction and mining batteries. W.J. Richardson *Chairman* L.J. Drysdale *Managing Director*

Tungstone Batteries Ltd.

Market Harborough and Germany: Automotive and standby power batteries. W.J. Richardson *Chairman* M.W. Mallen *Managing Director*

Uniross Batteries Ltd. (70.0%)

Nailsea, Bristol: Factoring of consumer battery-related products. W.J. Richardson *Chairman* E.F. Upperton *Managing Director*

Oldham France SA

Arras, France: Traction and standby power batteries. Gas detection equipment. W.J. Richardson *Chairman* C. Dreulle *Managing Director*

see notes on page 55

PRINCIPAL OPERATING UNITS, CHIEF EXECUTIVES AND MAIN PRODUCTS communical

BATTERIES DIVISION

continued

KW Battery Company

Chicago, Illinois and Chattanooga, Tennessee, USA: Traction batteries. W.J. Richardson Chatrman M.J. Scrivener Executive Vice President

Power Conversion, Inc.

New Jersey, USA and Puerto Rico: Lithium batteries. W.J. Richardson Chairman W. Vlasich President

Alber Engineering inc.

Boca Raton, Florida, USA: Battery test and monitoring systems. W.J. Richardson *Chairman* D. Alber *President*

AEROSPACE DIVISION

HDA Forgings Ltd.

Redditch and Smethwick: Forgings in aluminium alloys, titanium and special steels. C.R. Burns *Chairman* J.A. Halley *Managing Director*

insumat Ltd.

Gloucester and Biggleswade: Thermal and acoustic insulation. M.K. Bonehill *Director and General* Manager

Hawker de Havilland Ltd. (70.0%) Sydney, Melbourne and Perth, Australia: Aircraft production. Aircraft engine assembly. Aircraft component production. Aircraft modification, repair and overhaul. D.M. Hoare Chairman J.B. Hattersley Managing Director

Hawker Pacific Pty. Ltd.

Sydney, Australia: Aviation sales and support, aviation spares distribution and aircraft engine overhaul. C.M. Ryland Managing Director

Standard Aero Ltd.

Winnipeg, Vancouver and Montreal, Canada: Subsidiary in USA: Aircraft engine repair and overhaul. R.C. Hamaberg *President*

RAIL DIVISION

Brush Traction Ltd.

Loughborough: Diesel electric and electric locomotives, rail traction power equipment and control gear. H.R. Grant Chairman R. Woodward Managing Director

Hawker Siddeley Rail Projects Ltd

Chippenham: Turnkey projects, E & M systems and project management. H.R. Grant *Chairman* W.B. Tait *Managing Director*

Westinghouse Brake & Signal Ltd.

Brake Division: Chippenham: Compressed air and vacuum braking systems for freight, main line and rapid transit vehicles. Air, vacuum or electrical control of these systems. Railway doors, door operating, air conditioning and communication systems.

Signal Division: Chippenham: Railway signalling systems and equipment, train describers and automatic train control equipment.

H.R. Grant Chairman

J.R.C. Boulding Managing Director

Westinghouse Brake & Signai Co. (Australia) Ltd. (85.0%)

Brake Division: Sydney, Australia: Railway braking systems and equipment, fluid power equipment.

Signal Division: Melbourne, Australia: Railway signalling systems and equipment. Security systems.
H.R. Grant Chairman
D.R.J. Allen Managing Director

Safetran Systems Corporation

Minneapolis. Minnesota, USA: Railway signalling systems and equipment. Automatic level crossing systems. H.R. Grant Chairman P.L. Wheeler President

Dimetronic SA

Madrid, Spain: Railway signalling and automation systems and equipment. H.R. Grant *Chairman* J. Martinez Gomez *Managing Director*

Westinghouse Cubic Ltd. §

UK (50%): Revenue contract systems, ticket machines and automatic passenger gates.

GENERAL ENGINEERING DIVISION

Crompton Lighting Ltd.

Doncaster, Guiseley and subsidiary in Australia: Tungsten filament, sodium, mercury and fluorescent luminaires and lamps.

D.I.D. Lewis Chairman

D.J.D. Lewis Chairman D.H. Owen Managing Director

Lister-Petter Ltd.

Dursley and Swindon, subsidiaries in USA and Australia: Medium and high speed diesel engines for industrial applications.
D.G. Burv Chairman

G. Howell Managing Director

Hawker Siddeley Power Plant Ltd.

Thrupp: Diesel driven generating sets. Diesel engines for marine applications. D.G. Bury Chairman R.D. Brown Director and General Manager

Hawker Siddeley Electric Africa (Pty) Ltd.

Crompton Parkinson Division Johannesburg, South Africa: Merchandising of electrical products. R.P. Hampson Chairman R.G.H. Wiseman General Manager

Crompton Stud Weiding Ltd.

Market Harborough: Nuts, welded fasteners and stud welding equipment. W.J. Richardson *Chairman* T. Delday *Director and General Manager*

Lister Shearing Equipment Ltd.

Dursley: Sheep shearing equipment, horse and cattle clippers.
G. Howell Chairman
P.J. Buttery Director and General Manager

Hawker Noyes Pty. Ltd.

Brisbane, Perth and Sydney, Australia: Mining and construction machinery, merchandising of engineering products, non-ferrous metals and plastics machinery.

K.E. Odbert Managing Director

Fasco Consumer Products

Fayetteville, North Carolina, USA: Consumer and commercial products. F.W. Mack Chairman D.G. Wilson President

Canadian Steel Wheel†

Montreal, Canada: Wrought steel wheels for locomotives, freight and passenger railway cars.

G. Zaino General Manager

Orenda†

Toronto, Canada: Aircraft gas-turbine repair, overhaul and component manufacture, engineering laboratories and graphics services.

R.J. Munro Vice-President

see notes on page 55

GENERAL ENGINEERING

DIVISION continued

Kockums CanCart

Surrey, Canada: Kockums CanCar Corp. † Atlanta, Georgia, USA: Sawmill and lumber processing equipment. W.C. Griffiths Vice-President

CGTX Inc.†

(55.0% owned by Hawker Siddeley Canada Inc.) Montreal, Canada: Leasing of railway tank cars and special freight cars. Operation of service depots. R.D. Cole Chairman J.C. Léger President

Windsor Aerospace†

Ontario, Canada: Precision machined parts for the aerospace and related industries.

R.J. Munro Vice-President

Middleton Aerospace Corporation+

Massachusetts, USA: Precision machined parts for the aerospace industry.
R.J. Munro Vice-President

The Dosco Corporation†

Virginia, USA: Underground roadway roof supports. Sales and service of mining equipment. R.D. Cole *Chairman* J.E. Marianski *President*

Dosco Overseas Engineering Ltd.†

Tuxford: Production and tunnelling machines for coal, and other mineral mining and civil engineering. Dust suppression equipment.

R.D. Cole Chairman

K.T. Sisson Managing Director

Hollybank Engineering Co. Ltd.†

Tuxford: Underground roadway roof supports and mining contracting. R.D. Cole Chairman K.T. Sisson Managing Director

Delta Crompton Holdings Ltd. ϕ

UK (36.0%): Mains and general wiring cables.

Bunnings Ltd.§

Australia (24.6%): Sawmilling, timber and hardware merchandising, building contracting.

Onan Corporation§

USA (36.0%): Generating sets, petrol and diesel engines and alternators.

HOLDING COMPANIES

Crompton Parkinson Ltd.

Guiseley.

Westinghouse Brake and Signal Holdings Ltd.

Chippenham.

Hawker Siddeley Canada Inc. †† Toronto, Canada. R.D. Cole Chief Executive Officer

Notes to pages 52 - 55

- 1 Unless otherwise stated the companies are incorporated in England and Hawker Siddeley Group PLC owns indirectly 100% of the issued share capital.
- 2 †Divisions or subsidiaries of Hawker Siddeley Canada Inc. ††Hawker Siddeley Canada Inc. (59.1% of common shares and 41.8% of preferred shares held).
- 3 §Denotes associated company: particulars of share capital are shown below.

ASSOCIATED COMPANIES

The following are particulars of the capital of associated companies	Amount issued	Percentage held by the Group	Accounting period ended
Bunnings Ltd.	44,871,019 \$Aus	24.6	30th June
Ordinary stock units	77,871,017 3Aus	24.0	Join June
Crompton Greaves Ltd. Equity shares	192,000,000 Rupees	37.5	31st March
15% secured redeemable non-convertible debentures	200,000,000 Rupees		JIST March
Delta Crompton Holdings Ltd. Ordinary shares	87,983,000 £	36.0	31st December
Elco Elettromeccanica Fratelli Colombo S.p.A. Equity shares	1,230,000,000 Lire	49.0	31st December
Kirloskar Electric Co. Ltd.			
Equity shares	66,996,430 Rupees	20.3	
11% redeemable cumulative (taxable) preference shares	2,500,000 Rupees	· Nation	31st March
Lister Petter Diesels SA			
Common shares	2,726,050 Pesos	44.1	31st December
Onan Corporation			
Common stock	62,000 \$US	36.0	31st December
Sallster Diesels (Pty.) Ltd. Ordinary shares	1,428,571 Rand	35.0	30th September
Westinghouse Cubic Ltd. Ordinary shares	200,000 £	50.0	30th September

NOTICE OF MEETING

The Annual General Meeting of Hawker Siddeley Group Public Limited Company will be held at the Inn On The Park, Hamilton Place, Park Lane, London W1, on Friday 10th May, 1991 at 12 noon, for the following purposes:

- 1 To receive and adopt the Directors' Report and Accounts for the year ended 31st December, 1990. (Resolution 1).
- 2 To declare a final dividend on the ordinary shares. (Resolution 2).
- To re-elect Directors. (Resolutions 3-6 inclusive). In this connection the Company has received special notice, pursuant to Section 293(5) and 379 of the Companies Act 1985, of the intention to propose the following resolutions as ordinary resolutions:
 - "THAT Mr. Quinton Hazell, who retires by rotation and who attained the age of 70 years on 14th December, 1990 be and is hereby re-elected a Director of the Company."
 - "THAT Sir Lindsay Alexander who attained the age of 70 years on 12th September, 1990 be and is hereby re-elected a Director of the Company."
- 4 To re-appoint Price Waterhouse as Auditors of the Company and to authorise the Directors to fix the remuneration of the Auditors. (Resolutions 7 and 8).
- 5 To transact any other ordinary business of the Company.
- 6 As Special Business to consider and if thought fit pass the following Ordinary Resolution:-

THAT:-

- (A) in accordance with Rule 13(C) of the Rules of the Hawker Siddeley Group Executive Share Option Scheme and the Hawker Siddeley Group Overseas Executive Share Option Scheme this meeting hereby sanctions the following alteration being made to Rule 5(A)(3) of each of the said Schemes, namely the substitution for the references to "three years" and "3 per cent" of "five years" and "5 per cent" respectively; and
- (B) in accordance with Rule 11(A) of the Rules of the Hawker Siddely Group Savings Related Share Option Scheme this meeting hereby amends and sanctions the following amendment to Rule 6(A)(3) thereof, namely the deletion of the words from "during the period of three years" to the end of that paragraph and the substitution in their place of the words "during the period of five years ending on the day preceding that day shall not exceed 5 per cent of the Ordinary Shares in issue immediately prior to that day". (Resolution 9).

By Order of the Board D.R. Gilbert, *Secretary* 18, St. James's Square, London, SWIY 4LJ 11th April, 1991

Notes

- 1. Any member of the Company entitled to attend and vote at this Meeting is also entitled to appoint one or more proxies to attend and vote in his stead: a proxy need not be a member. A form of proxy is enclosed which to be effective must be deposited with the Company's Registrar not later than noon on 8th May, 1991.
- 2. Under the Company's Articles of Association only the holders of ordinary shares of the Company are entitled to attend and vote at this Meeting.
- 3. Copies of the Directors' service agreements with the Company and its subsidiaries, the Register of Directors' interests in the Company and its subsidiaries, and copies of the present Rules of the Hawker Siddeley Group Executive Share Option Scheme, The Hawker Siddeley Group Overseas Executive Share Option Scheme and The Hawker Siddeley Group Savings Related Share Option Scheme will be available for inspection during normal business hours at 18, St. James's Square, London, SWI from the date of this notice until the date of the Annual General Meeting and on 10th May, 1991, at the place of Meeting from 11:45 a.m. until the conclusion of the Meeting.

ENDORSED

In the office of the Secretary of State of the State of Colifornia

AUG 201980

MARCH FONG EU. Secretary of State

Gloria J. Carroll Deputy

ARTICLES OF INCORPORATION

OF

HAWKER PACIFIC INC.

I.

The name of this Corporation is HAWKER PACIFIC INC.

II.

The purpose of this Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of California other than the banking business, the trust company business or the practice of a profession permitted to be incorporated by the California Corporations Code.

III.

The name and address in the State of California of this Corporation's initial agent for Service of Process is:

Phillip Ratcliff 1630 Wilson Avenue Burbank, California 91504

IV.

This Corporation is authorized to issue only one class of shares of stock; the total number of shares which this corporation is authorized to issue is 10,000.

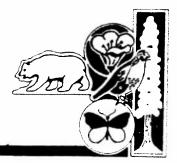
DATED: July 37, 1980

IAN P. GREAVES

I hereby declare that I am the person who executed the foregoing Articles of Incorporation, which execution is my act and deed.

TAN P. GREAVES

29027



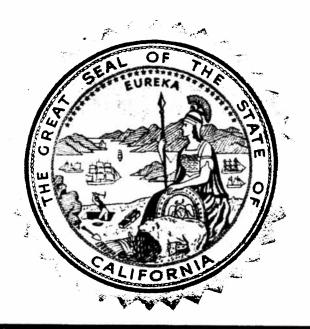
OFFICE OF THE SECRETARY OF STATE

I, MARCH FONG EU, Secretary of State of the State of California, hereby certify:

That the annexed transcript has been compared with the record on file in this office, of which it purports to be a copy, and that same is full, true and correct.

> IN WITNESS WHEREOF, I execute this certificate and affix the Great Seal of the State of California this

> > AUG 2 2 1980



March Foreg Eu

Secretary of State

ARTICLES OF INCORPORATION OF HAWKER PACIFIC INC.

ENDORSED
FILED
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of the State of Chifemia

FEB 1 9 1988

MARCH FOING EU. Secretary of State

Christopher Ryland, President and Ian Greaves, Secretary, certify that:

- They are the President and the Secretary, respectively, of HAWKER PACIFIC INC., a California corporation.
- 2. The Board of Directors of HAWKER PACIFIC INC. has approved the following amendment to Article IV of the Articles of Incorporation of said corporation:

The language contained in Article IV of the Articles of Incorporation is hereby deleted in its entirety and in its place and stead is placed the following language:

ARTICLE IV.

A. Classes of Shares in General

The Corporation is authorized to issue two classes of shares, designated respectively, "common" and "preferred." The total number of common shares authorized is 10,000. Of this number, 5,250 shares of HAWKER PACIFIC INC. common stock have been issued and were outstanding and shall continue to be designated, as "common shares." The par value of each common share is \$100. The total number of preferred shares authorized is 50,000 shares. The par value of each preferred share is \$100.00.

The preferred shares shall be entitled to dividends as provided in Paragraph b(1) of Article IV, shall be redeemable in the manner and on the conditions provided in Paragraph 2 of Article IV and shall be entitled on any liquidation, dissolution, or winding up of the corporation to receive the amount per share provided in Paragraph 4 of Article IV. The Preferred Shares shall not be entitled to voting rights as set forth under Paragraph 3 of Article IV, but shall be entitled to all other rights, preferences, and privileges, and be subject to all such restrictions as are granted to or imposed on such shares in this Article.

B. Matters Fixed by Articles

The rights, preferences, privileges, and restrictions granted to or imposed on the respective classes of shares or in the holders thereof are as follows:

- (1) Dividend Rights.
- (a) The holders of preferred shares shall be entitled to receive, when as declared by the Board of Directors, out of any assets of the Corporation at the time legally available therefor (and whether the profits resolved to be distributed were earned in that financial year or previous financial years), non-cumulative preferential dividends in cash at the respective rates fixed by the Board of Directors in compliance with California statutes, including but not limited to California Corporation Code §§ 500 and 503, or any successors thereof to the extent applicable, as great as, but not to exceed, a sum of Three

Dollars (\$3.00) for every One Hundred Dollars (\$100.00) of paid-up non-voting redeemable preference shares.

The preference shares shall rank for such preferential dividends in priority to the common shares, and no dividends shall in any financial year of the corporation be resolved to be paid on the common shares preferential dividends totalling Three unless (\$3.00) for every One Hundred Dollars (\$100.00) nominal amount of preference shares which is paid up have in that financial year been resolved to be paid on the preference shares. After preferential dividends totalling Three Dollars (\$3.00) for every One Hundred Dollars (\$100.00) nominal amount of preference shares which is paid up have in a financial year been resolved to be paid on the preference shares, the preference shares shall not participate with the common shares in any further profits of the corporation available for distribution in that financial year. The date of the resolution to distribute and not the date of distribution shall determine the respective rights of the holders of preference shares and the holders of the common shares in respect of any distribution of the profits of the company.

(2) Redemption.

Subject to the provisions of the California Corporation Code, including but not limited to California Corporation Code § 509 or any successor thereof to the extent applicable, the preference shares shall be redeemable in the following manner:

- (a) The Corporation may at any time redeem the whole or any part of the preference shares for the time being issued and outstanding at par;
- (b) The preference shares to be redeemed on each occasion including the time, place and manner of redemption shall be determined by the Board of Directors;
- (c) Forthwith, after such determination the Corporation shall give to the holders of the preference shares being redeemed notice in writing of the Corporation's intention to redeem the same and fixing a time (not more than one month ahead) and place for the redemption and surrender of the shares to be redeemed;
- (d) At the time and place so fixed each such holder shall be bound to surrender to the Corporation the certificate for his preference shares to be redeemed and the Corporation shall pay to him the amount payable in respect of such redemption and, where any such certificate comprises any shares which have not been drawn for redemption, the Corporation shall issue to the holder thereof a fresh certificate therefor:
- (e) Preferred shares so redeemed by the Corporation shall be restored to the status of authorized but unissued preferred shares; and
- (f) In the event of a partial redemption, the shares to be redeemed shall be in a manner approved by the Board of Directors.

The common shares of the company are not redeemable at the time of this amendment and shall not be

made redeemable to the extent that the terms of any California statute, including but not limited to California Corporations Code § 402(c) or any successor thereof to the extent applicable, might then operate to invalidate the redeemability of preferred shares.

- (3) <u>Voting Rights</u>.
- (a) The holders of the preference shares shall have no right to attend or vote at any general meeting or other meeting as designated in the Bylaws of the Corporation, but they shall have the right to receive notices of such general meetings and all other documents which are sent to the holders of the common shares or which the holders of the common shares have the right to receive, including, but without limitation, the annual reports and copies of the annual audited accounts of the Corporation.
- (b) The holders of the common shares shall have the exclusive voting rights and power of the Corporation.
 - (4) Liquidation Rights.
- (a) General. On any voluntary or involuntary liquidation, dissolution, or winding up of the Corporation, the holders of the preferred shares shall be entitled to receive from the assets of the Corporation a preferential amount in cash of One Hundred Dollars (\$100.00) per share.
- (b) Merger. A merger of the Corporation with another corporation shall not be deemed a liquidation, dissolution, or winding up within the meaning of this paragraph.

This amendment has been approved by the required vote of the shareholders in accordance with Sections 902 and 903 of the California Corporations Code. At the time of the amendment and immediately prior thereto, the Corporation had one class of common shares. Each outstanding common share is entitled to one vote. The Corporation has 5,250 shares of common shares outstanding. The number of common shares voting in favor of the amendment exceeded the vote required, in that the affirmative vote of a majority, (that is, more than 50% of the outstanding common shares) was required for approval of the amendment and the amendment was approved unanimously by the affirmative vote of 5,250 shares, or 100% of the outstanding common shares.

CHRISTOPHER RYLAND, President

IAN GREAVES, Secretary

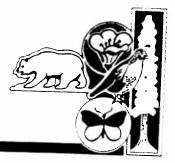
Each of the undersigned declares under penalty of perjury that the matters set forth in the foregoing Certificate are true and correct as of his own knowledge and that this declaration was executed on 4th December, 1987 at Sydney, New South Wales, Australia.

CHRISTOPHER M. RYLAND

President

IAN P. GREAVES

Secretary



State Of California OFFICE OF THE SECRETARY OF STATE

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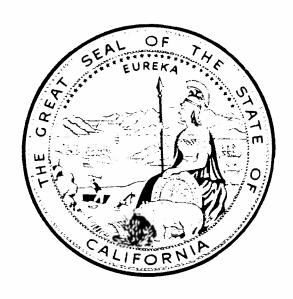
CORPORATION DIVISION

I, MARCH FONG EU, Secretary of State of the State of California, hereby certify:

That the annexed transcript has been compared with the corporate record on file in this office, of which it purports to be a copy, and that same is full, true and correct.

> IN WITNESS WHEREOF, I execute this certificate and affix the Great Seal of the State of California this

> > MAR 2 2 1988



March Foreg Eu

Secretary of State

BY-LAWS

of

HAWKER PACIFIC INC. a California corporation

<u>ARTICLE I</u> DIRECTORS; MANAGEMENT

Section 1. a. Powers.

Subject to the provisions of the General Corporation Law of California, effective January 1, 1977, (to which the various Section numbers quoted herein relate) and subject to any limitation in the Articles of Incorporation and the By-Laws relating to action required to be approved by the Shareholders (Sec. 153) or by the outstanding shares (Sec. 152), the business and affairs of this corporation shall be managed by and all corporate powers shall be exercised by or under direction of the Board of Directors.

b. Standard of Care.

Each Director shall exercise such powers and otherwise perform such duties in good faith, in the manner such director believes to be in the best interests of the corporation, and with such care, including reasonable inquiry, using ordinary prudence, as a person in a like position would use under similar circumstances. (Sec. 309)

c. Exception for Close Corporation.

Notwithstanding the provisions of Section 1, in the event that this corporation shall elect to become a close corporation as defined in Sec. 158, its Shareholders may enter into a Shareholders' Agreement

as provided in Sec. 300(b). Said agreement may provide for the exercise of corporate powers and the management of the business and affairs of this corporation by the Shareholders, provided however such agreement shall, to the extent and so long as the discretion or the powers of the Board in its management of corporate affairs is controlled by such agreement, impose upon each Shareholder who is a party thereof, liability for managerial acts performed or omitted by such person pursuant thereto otherwise imposed upon Directors as provided in Sec. 300(d).

Section 2. Number and Qualification.

The authorized number of Directors of the corporation shall be five.

This number may be changed by amendment to the Articles of Incorporation or by an amendment to this Section 2, ARTICLE I, of these By-Laws, adopted by the vote or written assent of the Shareholders entitled to exercise majority voting power as provided in Sec. 212.

Section 3. Election and Tenure of Office.

The Directors shall be elected by ballot at the annual meeting of the Shareholders, to serve for one year or until their successors are elected and have qualified. Their term of office shall begin immediately after election.

Section 4. Vacancies.

Vacancies in the Board of Directors may be filled by a majority of the remaining Directors, though less than a quorum, or by a sole remaining Director,

and each Director so elected shall hold office until his successor is elected at an annual meeting of Shareholders or at a special meeting called for that purpose.

The Shareholders may at any time elect a Director to fill any vacancy not filled by the Directors, and may elect the additional Directors at the meeting at which an amendment of the By-Laws is voted authorizing an increase in the number of Directors.

A vacancy or vacancies shall be deemed to exist in case of the death, resignation or removal of any Director, or if the Shareholders shall increase the authorized number of Directors but shall fail at the meeting at which such increase is authorized, or at an adjournment thereof, to elect the additional Director so provided for, or in case the Shareholders fail at any time to elect the full number of authorized Directors.

If the Board of Directors accepts the resignation of a Director tendered to take effect at a future time, the Board, or the Shareholders, shall have power to elect a successor to take office when the resignation shall become effective.

No reduction of the number of Directors shall have the effect of removing any Director prior to the expiration of his term of office.

Section 5. Removal of Directors.

The entire Board of Directors or any individual Director may be removed from office as provided by Secs. 302, 303 and 304 of the Corporations Code of the State of California. In such case, the remaining Board members may elect a successor Director

to fill such vacancy for the remaining unexpired term of the Director so removed.

Section 6. Notice, Place and Manner of Meetings.

Meetings of the Board of Directors may be called by the Chairman of the Board, or the President, or any Vice President, or the Secretary, or any two (2) Directors and shall be held at the principal executive office of the corporation in the State of California, unless some other place is designated in the notice of the meeting. Members of the Board may participate in a meeting through use of a conference telephone or similar communications equipment so long as all members participating in such a meeting can hear one another. Accurate minutes of any meeting of the Board or any committee thereof, shall be maintained as required by Sec. 312 of the Code by the Secretary or other officer designated for that purpose.

Section 7. Organization Meetings.

The organization meetings of the Board of Directors shall be held immediately following the adjournment of the annual meetings of the Shareholders.

Section 8. Other Regular Meetings.

Regular meetings of the Board of Directors shall be held at the corporate offices, or at such other place and time as may be designated by the Board of Directors. Notice of regular meetings shall be delivered personally to the directors or personally communicated to them by a corporation officer by telephone or telegraph.

Section 9. Special Meetings - Notices - Waivers.

Special meetings of the Board may be called at any time by the President or, if he is absent or unable or refuses to act, by any Vice President or the Secretary or by any two Directors, or by one Director if only one is provided.

At least forty-eight (48) hours notice of the time and place of special meetings shall be delivered personally to the Directors or personally communicated to them by a corporate officer by telephone or telegraph. If the notice is sent to a Director by letter, it shall be addressed to him at his address as it is shown upon the records of the corporation, (or if it is not so shown on such records or is not readily ascertainable, at the place in which the meetings of the Directors are regularly held). In case such notice is mailed, it shall be deposited in the United States mail, postage prepaid, in the place in which the principal executive office of the corporation is located at least four (4) days prior to the time of the holding of the meeting. Such mailing, telegraphing, telephoning or delivery as above provided shall be due, legal and personal notice to such Director.

When all of the Directors are present at any Directors' meeting, however called or noticed, and either (i) sign a written consent thereto on the records of such meeting, or (ii) if a majority of the Directors are present and if those not present sign a waiver of notice of such meeting or a consent to holding the meeting or an approval of the minutes thereof, whether prior to or after the holding of such meeting,

which said waiver, consent or approval shall be filed with the Secretary of the corporation or (iii) if a Director attends a meeting without notice but without protesting, prior thereto or at its commencement, the lack of notice to him, then the transactions thereof are as valid as if had at a meeting regularly called and noticed.

Section 10. Sole Director Provided by Articles of Incorporation.

In the event only one Director is required by the By-Laws or Articles of Incorporation, then any reference herein to notices, waivers, consents, meetings or other actions by a majority of quorum of the Directors shall be deemed to refer to such notice, waiver, etc., by such sole Director, who shall have all the rights and duties and shall be entitled to exercise all of the powers and shall assume all the responsibilities otherwise herein described as given to a Board of Directors.

Section 11. <u>Directors Acting by Unanimous Written</u> Consent.

Any action required or permitted to be taken by the Board of Directors may be taken without a meeting and with the same force and effect as if taken by a unanimous vote of Directors, if authorized by a writing signed individually or collectively by all members of the Board. Such consent shall be filed with the regular minutes of the Board.

Section 12. Quorum.

A majority of the number of Directors

as fixed by the Articles of Incorporation or By-Laws shall be necessary to constitute a quorum for the transaction of business, and the action of a majority of the Directors present at any meeting at which there is a quorum, when duly assembled, is valid as a corporate act; provided that a minority of the Directors, in the absence of a quorum, may adjourn from time to time, but may not transact any business. A meeting at which a quorum is initially present may continue to transact business, notwithstanding the withdrawal of Directors, if any action taken is approved by a majority of the required quorum for such meeting.

Section 13. Notice of Adjournment.

Notice of the time and place of holding an adjourned meeting need not be given to absent Directors if the time and place be fixed at the meeting adjourned and held within twenty-four (24) hours, but if adjourned more than twenty-four (24) hours, notice shall be given to all Directors not present at the time of the adjournment.

Section 14. Compensation of Directors.

Directors may receive salary and/or reimbursement.of expenses as the Board may determine.

Section 15. Committees.

Committees of the Board may be appointed by resolution passed by a majority of the whole Board. Committees shall be composed of two or more members of the Board, and shall have such powers of the Board as may be expressly delegated to it by resolution of the

Board of Directors, except those powers expressly made non-delegable by Sec. 311.

Section 16. Advisory Directors.

The Board of Directors from time to time may elect one or more persons to be Advisory Directors who shall not by such appointment be members of the Board of Directors. Advisory Directors shall be available from time to time to perform special assignments specified by the President, to attend meetings of the Board of Directors upon invitation and to furnish consultation to the Board. The period during which the title shall be held may be prescribed by the Board of Directors. If no period is prescribed, the title shall be held at the pleasure of the Board.

Section 17. Resignations.

Any Director may resign effective upon giving written notice to the Chairman of the Board, the President, the Secretary or the Board of Directors of the corporation, unless the notice specifies a later time for the effectiveness of such resignation. If the resignation is effective at a future time, a successor may be elected to take office when the resignation becomes effective.

ARTICLE II OFFICERS

Section 1. Officers.

The Officers of the corporation shall be a Chairman of the Board or a President or both, a Secretary

and a Chief Financial Officer. The corporation may also have, at the discretion of the Board of Directors, one or more Vice Presidents, one or more Assistant Secretaries and such other Officers as may be appointed in accordance with the provisions of Section 3 of this Article. One person may hold two or more offices.

Section 2. Election.

The Officers of the corporation, except such Officers as may be appointed in accordance with the provisions of Section 3 or Section 5 of this Article shall be chosen annually by the Board of Directors, and each shall hold his office until he shall resign or shall be removed or otherwise disqualified to serve, or his successor shall be elected and qualified.

Section 3. Subordinate Officers, Etc.

The Board of Directors may appoint such other Officers as the business of the corporation may require, each of whom shall hold office for such period, have such authority and perform such duties as are provided in the By-Laws or as the Board of Directors may from time to time determine.

Section 4. Removal and Resignation.

Any Officer may be removed, either with or without cause, by a majority of the Directors at the time in office, at any regular or special meeting of the Board, or, except in case of an Officer chosen by the Board of Directors, by any Officer upon whom such power of removal may be conferred by the Board of Directors.

Any officer may resign at any time by giving written notice to the Board of Directors, or to the President, or to the Secretary of the corporation. Any such resignation shall take effect at the date of the receipt of such notice or at any later time specified therein; and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

Section 5. Vacancies.

A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in the By-Laws for regular appointments to such office.

Section 6. Chairman of the Board.

The Chairman of the Board, if there shall be such an Officer, shall, if present, preside at all meetings of the Board of Directors, and exercise and perform such other powers and duties as may be from time to time assigned to him by the Board of Directors or prescribed by the By-Laws.

Section 7. President.

Subject to such supervisory powers, if any, as may be given by the Board of Directors to the Chairman of the Board, if there be such an Officer, the President shall be the Chief Executive Officer of the Corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and Officers of the corporation.

He shall preside at all meetings of the Shareholders and in the absence of the Chairman of the Board, or if there be none, at all meetings of the Board of Directors. He shall be ex officio a member of all the standing committees, including the Executive Committee, if any, and shall have the general powers and duties of management usually vested in the office of President of a corporation, and shall have such other powers and duties as may be prescribed by the Board of Directors or the By-Laws.

Section 8. Vice President.

In the absence or disability of the President, the Vice Presidents, in order of their rank as fixed by the Board of Directors, or if not ranked, the Vice President designated by the Board of Directors, shall perform all the duties of the President, and when so acting shall have all the powers of, and be subject to, all the restrictions upon, the President. The Vice Presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the Board of Directors or the By-Laws.

Section 9. Secretary.

The Secretary shall keep, or cause to be kept, a book of minutes at the principal office or such other place as the Board of Directors may order, of all meetings of Directors and Shareholders, with the time and place of holding, whether regular or special, and if special, how authorized, the notice thereof given,

the names of those present at Directors' meetings, the number of shares present or represented at Shareholders' meetings and the proceedings thereof.

The Secretary shall keep, or cause to be kept, at the principal office or at the office of the corporation's transfer agent, a share register, or duplicate share register, showing the names of the Shareholders and their addresses; the number and classes of shares held by each; the number and date of certificates issued for the same; and the number and date of cancellation of every certificate surrendered for cancellation.

The Secretary shall give, or cause to be given, notice of all the meetings of the Shareholders and of the Board of Directors required by the By-Laws or by law to be given, and he shall keep the seal of the corporation in safe custody, and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or by the By-Laws.

Section 10. Chief Financial Officer.

This Officer shall keep and maintain, or cause to be kept and maintained in accordance with generally accepted accounting principles, adequate and correct accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, earnings (or surplus) and shares. The books of account shall at all reasonable times be open to inspection by any Director.

This Officer shall deposit all moneys and other valuables in the name and to the credit of the corporation with such depositaries as may be designated

by the Board of Directors. He shall disburse the funds of the corporation as may be ordered by the Board of Directors, shall render to the President and Directors, whenever they request it, an account of all of his transactions and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors of the By-Laws.

ARTICLE III SHAREHOLDERS' MEETINGS

Section 1. Place of Meetings.

Meetings of the Shareholders shall be held at the principal executive office of the corporation, in the State of California, unless some other appropriate and convenient location be designated for that purpose from time to time by the Board of Directors.

Section 2. Annual Meetings.

The annual meetings of the Shareholders shall be held, each year, at the time and on the day following:

Time of Meeting: 10:00 A.M.

Date of Meeting: May 18

If this day shall be a legal holiday, then the meeting shall be held on the next succeeding business day, at the same hour. At the annual meeting, the Shareholders shall elect a Board of Directors, consider reports of the affairs of the corporation and transact such other business as may be properly brought before the meeting.

Section 3. Special Meetings.

Special meetings of the Shareholders may be called at any time by the Board of Directors, the Chairman of the Board, the President, a Vice President, the Secretary, or by one or more Shareholders holding not less than one-tenth (1/10) of the voting power of the corporation. Except as next provided, notice shall be given as for the annual meeting.

Upon receipt of a written request addressed to the Chairman, President, Vice President, or Secretary, mailed or delivered personally to such Officer by any person (other than the Board) entitled to call a special meeting of Shareholders, such Officer shall cause notice to be given, to the Shareholders entitled to vote, that a meeting will be held at a time requested by the person or persons calling the meeting, not less than twenty-five nor more than sixty days after the receipt of such request. If such notice is not given within twenty days after receipt of such request, the persons calling the meeting may give notice thereof in the manner provided by these By-Laws or apply to the Superior Court as provided in Sec. 305(c).

Section 4. Notice of Meetings - Reports.

Notice of meetings, annual or special, shall be given in writing not less than ten nor more than sixty days before the date of the meeting, to Shareholders entitled to vote thereat by the Secretary or the Assistant Secretary, or if there be no such Officer, or in the case of his neglect or refusal, by any Director or Shareholder.

Such notices or any reports shall be given personally or by mail or other means of written communication as provided in Sec. 601 of the Code and shall be sent to the Shareholder's address appearing on the books of the corporation, or supplied by him to the corporation for the purpose of notice, and in the absence thereof, as provided in Sec. 601 of the Code.

Notice of any meeting of Shareholders shall specify the place, the day and the hour of meeting, and (1) in case of a special meeting, the general nature of the business to be transacted and no other business may be transacted, or (2) in the case of an annual meeting, those matters which the Board at date of mailing, intends to present for action by the Shareholders. At any meetings where Directors are to be elected, notice shall include the names of the nominees, if any, intended at date of Notice to be presented by management for election.

If a Shareholder supplies no address, notice shall be deemed to have been given to him if mailed to the place where the principal executive office of the company, in California, is situated, or published at least once in some newspaper of general circulation in the County of said principal office.

Notice shall be deemed given at the time it is delivered personally or deposited in the mail or sent by other means of written communication. The Officer giving such notice or report shall prepare and file an affidavit or declaration thereof.

When a meeting is adjourned for forty-five days or more, notice of the adjorned meeting shall be given as in case of an original meeting. Save,

as aforesaid, it shall not be necessary to give any notice of adjournment or of the business to be transacted at an adjourned meeting other than by announcement at the meeting at which such adjournment is taken.

Section 5. Validation of Shareholders' Meetings.

The transactions of any meeting of Shareholders, however called and noticed, shall be valid as though had at a meeting duly held after regular call and notice, if a quorum be present either in person or by proxy, and if, either before or after the meeting, each of the Shareholders entitled to vote, not present in person or by proxy, sign a written waiver of notice, or a consent to the holding of such meeting or an approval of the minutes thereof. All such waivers, consents or approvals shall be filed with the corporate records or made a part of the minutes of the meeting. Attendance shall constitute a waiver of notice, unless objection shall be made as provided in Sec. 601(e).

Section 6. Shareholders Acting Without a Meeting - Directors.

Any action which may be taken at a meeting of the Shareholders, may be taken without a meeting or notice of meeting if authorized by a writing signed by all of the Shareholders entitled to vote at a meeting for such purpose, and filed with the Secretary of the corporation, provided further that while ordinarily Directors can only be elected by unanimous written consent under Sec. 603(d), if the Directors fail to fill a vacancy, then a Director to fill that vacancy may be elected by the written consent of persons holding

a majority of shares entitled to vote for the election of Directors.

Section 7. Other Actions Without a Meeting.

Unless otherwise provided in the GCL or the Articles, any action which may be taken at any annual or special meeting of Shareholders may be taken without a meeting and without prior notice if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

Unless the consents of all Shareholders entitled to vote have been solicited in writing,

- (1) Notice of any Shareholder approval pursuant to Secs. 310, 317, 1201 or 2007 without a meeting by less than unanimous written consent shall be given at least 10 days before the consummation of the action authorized by such approval, and
- (2) Prompt notice shall be given of the taking of any other corporate action approved by Shareholders without a meeting by less than unanimous written consent, to each of those Shareholders entitled to vote who have not consented in writing.

Any Shareholder giving a written consent, or the Shareholder's proxyholders, or a transferee of the shares of a personal representative of the Shareholder or their respective proxyholders, may revoke the consent by a writing received by the corporation prior to the time that written consents of the number

of shares required to authorize the proposed action have been filed with the Secretary of the corporation, but may not do so thereafter. Such revocation is effective upon its receipt by the Secretary of the corporation.

Section 8. Quorum.

The holders of a majority of the shares entitled to vote thereat, present in person, or represented by proxy, shall constitute a quorum at all meetings of the Shareholders for the transaction of business except as otherwise provided by law, by the Articles of Incorporation, or by these By-Laws. however, such majority shall not be present or represented at any meeting of the Shareholders, the Shareholders entitled to vote thereat, present in person, or by proxy, shall have the power to adjourn the meeting from time to time, until the requisite amount of voting shares shall be present. At such adjourned meeting at which the requisite amount of voting shares shall be represented, any business may be transacted which might have been transacted at a meeting as originally notified.

If a quorum be initially present, the Shareholders may continue to transact business until adjournment, notwithstanding the withdrawal of enough Shareholders to leave less than a quorum, if any action taken is approved by a majority of the Shareholders required to initially constitute a quorum.

Section 9. <u>Voting Rights; Cumulative Voting.</u> Only persons in whose names shares entitled

to vote stand on the stock records of the corporation on the day of any meeting of Shareholders, unless some other day be fixed by the Board of Directors for the determination of Shareholders of record, and then on such other day, shall be entitled to vote at such meeting.

Provided the candidate's name has been placed in nomination prior to the voting and one or more Shareholder has given notice at the meeting prior to the voting of the Shareholder's intent to cumulate the Shareholder's votes, every Shareholder entitled to vote at any election for Directors of any corporation for profit may cumulate his votes and give one candidate a number of votes equal to the number of Directors to be elected multiplied by the number of votes to which his shares are entitled, or distribute his votes on the same principle among as many candidates as he thinks fit.

The candidates receiving the highest number of votes up to the number of Directors to be elected are elected.

The Board of Directors may fix a time in the future not exceeding thirty (30) days preceding the date of any meeting of Shareholders or the date fixed for the payment of any dividend or distribution, or for the allotment of rights, or when any change or conversion or exchange of shares shall go into effect, as a record date for the determination of the Shareholders entitled to notice of and to vote at any such meeting, or entitled to receive any such dividend or distribution, or any allotment of rights, or to exercise the rights in respect to any such change, conversion or exchange of shares.

In such case only Shareholders of record on the date so fixed shall be entitled to notice of and to vote at such meeting, or to receive such dividends, distribution or allotment of rights, or to exercise such rights, as the case may be, notwithstanding any transfer of any share on the books of the company after any record date fixed as aforesaid. The Board of Directors may close the books of the company against transfers of shares during the whole or any part of such period.

Section 10. Proxies.

Every Shareholder entitled to vote, or to execute consents, may do so, either in person or by written proxy, executed in accordance with the provisions of Secs. 604 and 705 of the Code and filed with the Secretary of the corporation.

Section 11. Organization.

The President, or in the absence of the President, any Vice President, shall call the meeting of the Shareholders to order, and shall act as chairman of the meeting. In the absence of the President and all of the Vice Presidents, Shareholders shall appoint a chairman for such meeting. The Secretary of the company shall act as Secretary of all meetings of the Shareholders, but in the absence of the Secretary at any meeting of the Shareholders, the presiding Officer may appoint any person to act as Secretary of the meeting.

Section 12. Inspectors of Election.

In advance of any meeting of Shareholders the Board of Directors may, if they so elect, appoint inspectors of election to act at such meeting or any adjournments thereof. If inspectors of election be not so appointed, the chairman of any such meeting may, and on the request of any Shareholder or his proxy shall, make such appointment at the meeting in which case the number of inspectors shall be either one or three as determined by a majority of the Shareholders represented at the meeting.

Section 13. Shareholders' Agreements.

Notwithstanding the above provisions in the event this corporation elects to become a close corporation, an agreement between two or more Shareholders thereof, if in writing and signed by the parties thereof, may provide that in exercising any voting rights the shares held by them shall be voted as provided therein or in Sec. 706, and may otherwise modify these provisions as to Shareholders' meetings and actions.

ARTICLE IV CERTIFICATES AND TRANSFER OF SHARES

Section 1. Certificates for Shares.

Certificates for shares shall be of such form and device as the Board of Directors may designate and shall state the name of the record holder of the shares represented thereby; its number; date of issuance; the number of shares for which it is issued; a statement of the rights, privileges, preferences and restrictions,

if any; a statement as to the redemption or conversion, if any; a statement of liens or restrictions upon transfer or voting, if any; if the shares be assessable or, if assessments are collectible by personal action, a plain statement of such facts.

Every certificate for shares must be signed by the President or a Vice President and the Secretary or an Assistant Secretary or must be authenticated by facsimiles of the signatures of the President and Secretary or by a facsimile of the signature of its President and the written signature of its Secretary of an Assistant Secretary. Before it becomes effective every certificate for shares authenticated by a facsimile of a signature must be countersigned by a transfer agent or transfer clerk and must be registered by an incorporated bank or trust company, either domestic or foreign, as registrar of transfers.

Section 2. Transfer on the Books.

Upon surrender to the Secretary or transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

Section 3. Loss or Destroyed Certificates.

Any person claiming a certificate of stock to be lost or destroyed shall make an affidavit or

affirmation of that fact and shall if the Directors so require give the corporation a bond of indemnity, in form and with one or more sureties satisfactory to the Board, in at least double the value of the stock represented by said certificate, whereupon a new certificate may be issued in the same tenor and for the same number of shares as the one alleged to be lost or destroyed.

Section 4. Transfer Agents and Registrars.

The Board of Directors may appoint one or more transfer agents or transfer clerks, and one or more registrars, which shall be an incorporated bank or trust company—either domestic or foreign, who shall be appointed at such times and places as the requirements of the corporation may necessitate and the Board of Directors may designate.

Section 5. Closing Stock Transfer Books - Record Date.

In order that the corporation may determine the Shareholders entitled to notice of any meeting or to vote or entitled to receive payment of any dividend or other distribution or allotment of any rights or entitled to exercise any rights in respect of any other lawful action, the Board may fix, in advance, a record date, which shall not be more than sixty (60) nor less than ten (10) days prior to the date of such meeting nor more than sixty (60) days prior to any other action.

The record date for determining Shareholders entitled to notice of or to vote at a meeting of Shareholders

shall be at the close of business on the business day next preceding the day on which notice is given or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held.

The record date for determining Shareholders entitled to give consent to corporate action in writing without a meeting, when no prior action by the Board is necessary, shall be the day on which the first written consent is given.

The record date for determining Shareholders for any other purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto, or the 60th day prior to the date of such other action, whichever is later.

Section 6. Legend Condition.

In the event any shares of this corporation are issued pursuant to a permit or exemption therefrom requiring the imposition of a legend condition, the person or persons issuing or transferring said shares shall make sure said legend appears on the certificate and on the stub relating thereto in the stock record book and shall not be required to transfer any shares free of such legend unless an amendment to such permit or a new permit be first issued so authorizing such a deletion.

Section 7. Close Corporation Certificates.

All certificates representing shares of this corporation, in the event it shall elect to

become a close corporation, shall contain the legend required by Sec. 418c.

Section 8. Restrictions on Transfer of Shares.

- (a) No shares of the corporation or any interest therein shall be validly sold or otherwise transferred for consideration, either voluntarily, involuntarily, or by operation of law, and no purported vendee or other transferee shall be recognized as a shareholder of this corporation for any purpose whatsoever unless and until either the holders of all the other issued and outstanding shares of the corporation shall have filed with the Secretary of the corporation their written consents to the sale or other transfer of said shares, or said shares shall have been released from restrictions upon transfer as hereinafter provided.
- (b) In the event any shareholder desires to sell or otherwise transfer any or all of his shares of the corporation, such offering shareholder shall deliver a notice in writing by mail, or otherwise, to the Secretary of the corporation stating the price, terms, and conditions of such proposed sale or transfer, the number of shares to be sold or transferred, and his intention so to sell or transfer such shares. Within thirty (30) days thereafter, the corporation shall have the prior right to purchase all or any full number of such shares so offered at the price and upon the terms and conditions stated in such notice. Should the corporation fail to purchase all of said shares, at the expiration of said thirty (30) day period, or prior thereto, upon the determination of the corporation

to purchase none or only a portion of such shares so offered, the Secretary of the corporation shall within five (5) days thereafter, mail or deliver to each of the other common shareholders, a notice setting forth the particulars concerning said shares not so purchased by the corporation described in the notice received from the offering shareholder. The other shareholders shall have the right to purchase all of the shares specified in said Secretary's notice by delivering to the Secretary by mail or otherwise a written offer or offers to purchase all or any specified number of such shares upon the terms described in the Secretary's notice, if such offer or offers are so delivered to the Secretary within thirty (30) days after mailing or delivering such Secretary's notice to such other shareholders. If the total number of shares specified in such offers so received within such period by the Secretary exceeds the number of shares referred to in such Secretary's notice, each offering shareholder shall be entitled to purchase such proportion of the shares referred to in said notice to the Secretary, as the number of shares of this corporation which he holds, bears to the total number of shares held by all such shareholders desiring to purchase the shares referred to in said notice to the Secretary.

(c) If all of the shares referred to in said notice to the Secretary are not disposed of under such apportionment, each shareholder desiring to purchase shares in a number in excess of his proportionate share, as provided above, shall be entitled to purchase

such proportion of those shares which remain thus undisposed of, as the total number of shares which he holds bears to the total number of shares held by all of the shareholders desiring to purchase shares in excess of those to which they are entitled under such apportionment.

- (d) If none or only a part of the shares referred to in said notice to the Secretary is purchased, as aforesaid, by the corporation or in accordance with offers made by other shareholders, within said thirty (30) day period, the shareholder desiring to sell or transfer may dispose of all shares of stock referred to in said notice to the Secretary not so purchased by the corporation or by the other shareholders, to any person or persons he may so desire; provided, however, that he shall not sell or transfer such share at a lower price or on terms more favorable to the purchaser or transferee than those specified in said notice to the Secretary.
- (e) Within the limitations herein provided, this corporation may purchase the shares of this corporation from any offering shareholders, provided, however, that at no time shall this corporation be permitted to purchase all of its outstanding voting shares. Any sale or transfer or purported sale or transfer of the common shares of the corporation shall be null and void unless the terms, conditions, and provisions of this Section 8 are strictly observed and followed.

If transfer of stock of this corporation is restricted by the terms of the Articles of Incorporation or By-Laws of this corporation, such must be complied

with before due transfer can be made.

ARTICLE V CORPORATE RECORDS AND REPORTS - INSPECTION

Section 1. Records.

The corporation shall maintain, in accordance with generally accepted accounting principles, adequate and correct accounts, books and records of its business and properties. All of such books, records and accounts shall be kept at its principal executive office in the State of California, as fixed by the Board of Directors from time to time.

Section 2. <u>Inspection of Books and Records</u>.

All books and records provided for in Sec. 1500 shall be open to inspection of the Directors and Shareholders from time to time and in the manner provided in said Sec. 1600 - 1602.

Section 3. Certification and Inspection of By-Laws.

The original or a copy of these By-Laws, as amended or otherwise altered to date, certified by the Secretary, shall be kept at the corporation's principal executive office and shall be open to inspection only by the Shareholders of the company, at all reasonable times during office hours, as provided in Sec. 213 of the Corporations Code.

Section 4. Checks, Drafts, etc. All checks, drafts or other orders for

payment of money, notes or other evidences of indebtedness, issued in the name of or payable to the corporation, shall be signed or endorsed by such person or persons and in such manner as shall be determined from time to time by resolution of the Board of Directors.

Section 5. Contracts, etc. -- How Executed.

The Board of Directors, except as in the By-Laws otherwise provided, may authorize any Officer or Officers, agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation. Such authority may be general or confined to specific instances. Unless so authorized by the Board of Directors, no Officer, agent or employee shall have any power of authority to bind the corporation by any contract or agreement, or to pledge its credit, or to render it liable for any purpose or to any amount, except as provided in Sec. 313 of the Corporations Code.

ARTICLE VI ANNUAL REPORTS

Section 1. <u>Due Date, Contents.</u>

The Board of Directors shall cause an annual report or statement to be sent to the Shareholders of this corporation not later than 120 days after the close of the fiscal or calendar year in accordance with the provisions of Secs. 1500 - 1501. Such report shall be sent to Shareholders at least fifteen (15) days prior to the annual meeting of Shareholders. Such report

shall contain a balance sheet as of the fiscal year, an income statement and a statement of changes in financial position for such fiscal year, accompanied by any report thereon of independent accountant, or if there is no such report, a certificate of the Chief Financial Officer or President that such statements were prepared without audit from the books and records of the corporation.

Section 2. Waiver.

The foregoing requirement of an annual report may be waived by the Board so long as this corporation shall have less than 100 Shareholders.

ARTICLE VII AMENDMENTS TO BY-LAWS

Section 1. By Shareholders.

New By-Laws may be adopted or these By-Laws may be repealed or amended at their annual meeting, or at any other meeting of the Shareholders called for that purpose, by a vote of Shareholders entitled to exercise a majority of the voting power of the corporation, or by written assent of such Shareholders.

Section 2. Powers of Directors.

Subject to the right of the Shareholders to adopt, amend or repeal By-Laws, as provided in Section 1 of this Article VII, and the limitations of Sec. 204(a)(5) and Sec. 212, the Board of Directors may adopt, amend or repeal any of these By-Laws other than

a By-Law or amendment thereof changing the authorized number of Directors.

Section 3. Record of Amendments.

Whenever an amendment or new By-Law is adopted, it shall be copied in the book of By-Laws with the original By-Laws, in the appropriate place. If any By-Law is repealed, the fact of repeal with the date of the meeting at which the repeal was enacted or written assent was filed shall be stated in said book.

ARTICLE VIII MISCELLANEOUS

Section 1. References to Code Sections.

"Sec." references herein refer to the equivalent Sections of the General Corporation Law effective January 1, 1977, as amended.

Section 2. Effect of Shareholders' Agreement.

Any Shareholders' Agreement authorized by Sec. 300(b), shall only be effective to modify the terms of these By-Laws if this corporation elects to become a close corporation with appropriate filing of or amendment to its Articles as required by Sec. 202 and shall terminate when this corporation ceases to be a close corporation. Such an agreement cannot waive or alter Secs. 158, (defining close corporations), 202 (requirements of Articles of Incorporation), 500 and 501 (relative to distributions), 111 (merger), 1201(e) (reorganization or Chapters 15 (Records ad Reports), 16 (Rights of Inspection), 18 (Involuntary Dissolution),

or 22 (Crimes and Penalties). Any other provisions of the Code or these By-Laws may be altered or waived thereby, but to the extent they are not so altered or waived, these By-Laws shall be applicable.

Section 3. Representation of Shares in Other Corporations. Shares of other corporations standing in the name of this corporation may be voted or represented and all incidents thereto may be exercised on behalf of the corporation by the Chairman of the Board, the President or any Vice President and the Secretary or an Assistant Secretary.

Section 4. <u>Subsidiary Corporations</u>.

Shares of this corporation owned by a subsidiary shall not be entitled to vote on any matter. A subsidiary for these purposes is defined as a corporation, the shares of which possessing more than 25% of the total combined voting power of all classes of shares entitled to vote, are owned directly or indirectly through one or more subsidiaries.

Section 5. Indemnity.

. The corporation shall indemnify any Director, Officer, agent or employee as to those liabilities and on those terms and conditions as shall be permitted under the provisions of Sec. 317. The corporation shall have the right to purchase and may maintain insurance on behalf of any such persons whether or not the corporation would have the power to indemnify such person against the liability insured against.

Section 6. Reimbursement.

Any payments made to or on behalf of an Officer of the corporation such as salary, commission, bonus, interest, rent, or entertainment expense, by way of compensation, reimbursement, or otherwise, which shall be disallowed in whole or in part as a deductible expense by the Internal Revenue Service, shall be reimbursed to the corporation by such Officer to the full extent of such disallowance. It shall be the duty of the Directors, as a Board, to enforce payment of each such amount disallowed. In lieu of the Directors, proportion amounts may be withheld from his future compensation payments until the amount owed to the corporation has been recovered.

CERTIFICATE OF ADOPTION OF BY-LAWS

Adoption by Incorporator(s) or First Director(s).

The undersigned person(s) appointed in the Articles of Incorporation to act as the Incorporator(s) or First Director(s) of the above-named corporation hereby adopt the same as the By-Laws of said corporation.

1980.

EXECUTED this 1st day of October,

IAN PETER GREAVES

Name

Certificate by Secretary.

I DO HEREBY CERTIFY AS FOLLOWS:

That I am the duly elected, qualified and acting Secretary of the above-named corporation; that the foregoing By-Laws were adopted as the By-Laws of said corporation on the date set forth above by the person(s) appointed in the Articles of Incorporation to act as the Incorporator(s) or First Director(s) of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal this 1st day of October , 1980.

Secretary

Certificate by Secretary of Adoption by Shareholders' Vote. THIS IS TO CERTIFY:

That I am the duly elected, qualified and acting Secretary of the above-named corporation and that the above and foregoing Code of By-Laws was submitted to the shareholders at their first meeting held on the date set forth in the By-Laws and recorded in the minutes thereof, was ratified by the vote of shareholders entitled to exercise the majority of the voting power of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand this 1st day of October 1980.

Secretary